```
=> D HIS

     (FILE 'HOME' ENTERED AT 11:50:46 ON 04 DEC 2000)

     FILE 'HCAPLUS' ENTERED AT 11:50:54 ON 04 DEC 2000
L1            13 S LIQUID PHASE CARRIER
L2             2 S NUCLEIC ACID SOLUTION PHASE SYNTHESIS
L3             1 S L2 NOT L1
L4           422 S SOLUTION PHASE(3W)SYNTHESIS
L5             1 S SOLUTION PHASE BIOPOLYMER SYNTHESIS
L6             0 S L5 NOT L1
L7            87 S SOLUTION PHASE(4A)SYNTHESIS(4A)(BIOPOLYMER OR BIO POLYMER
OR
L8            77 S (PREPAR? OR MANUF? OR PRODUC? ) AND L7
L9            87 S SYNTHES? AND L7
L10          426 S (L1 OR L2 OR L4)(6A)(PREPAR? OR MANUF? OR PRODUC? OR
SYNTHES?
L11           79 S L7 AND L10
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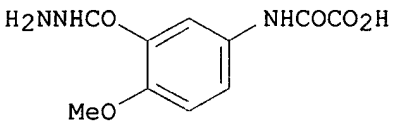
=> D BIB ABS 1-10

L11 ANSWER 1 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 2000:590846 HCAPLUS
DN 133:310129
TI Development of a **Solution-Phase Synthesis** of Minor Groove Binding Bis-Intercalators Based on Triostin A Suitable for Combinatorial Synthesis
AU Boger, Dale L.; Lee, Jae Kyoo
CS Department of Chemistry and The Skaggs Institute for Chemical Biology, Scripps Research Institute, La Jolla, CA, 92037, USA
SO J. Org. Chem. (2000), 65(19), 5996-6000
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
AB The development of a **soln. phase synthesis** of a triostin A analog (azatriostin A) is disclosed which is suitable for the prepn. of combinatorial libraries enlisting only liq.-liq. acid/base extns. for the isolation and purifn. of all intermediates and the final product.
RE.CNT 38
RE
(2) Addess, K; Nucleic Acids Res 1994, V22, P5484 HCAPLUS
(3) Albericio, F; Synthesis 1987, P271 HCAPLUS
(4) Alfredson, T; Biopolymers 1991, V31, P1689 HCAPLUS
(5) Boger, D; Bioorg Med Chem 1998, V6, P1347 HCAPLUS
(6) Boger, D; Bioorg Med Chem Lett 1997, V7, P1903 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

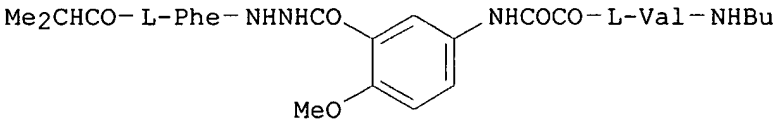
L11 ANSWER 2 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 2000:557699 HCAPLUS
DN 133:267143
TI Solid-phase synthesis of chemotactic peptides using .alpha.-azido acids
AU Tornoe, Christian W.; Sengelov, Henrik; Meldal, Morten
CS Department of Chemistry, Carlsberg Laboratory, Copenhagen, DK-2500, Den.
SO J. Pept. Sci. (2000), 6(7), 314-320
CODEN: JPSIEI; ISSN: 1075-2617
PB John Wiley & Sons Ltd.
DT Journal
LA English
AB Four chemotactic peptides, For-Met-Xxx-Phe-OMe (Xxx = Aib, Deg, Dpg, or Dph, where Aib = 2-aminoisobutyric acid, Deg = diethylglycine, Dpg = dipropylglycine, Dpg = diphenylglycine) with an .alpha.,.alpha.-disubstituted amino acid at position 2 have been synthesized by the azido acid method on solid-phase, and were tested for biol. activity. Dpg in the central position was found to be as active as the natural chemotactic peptide for chemotactic activity toward human neutrophils. Higher yields were obtained than previously reported **soln.-phase syntheses** of chemotactic **peptides**, and EEDQ (2-ethoxy-1-ethoxycarbonyl-1,2-dihydroquinoline) was used successfully for the difficult solid-phase formylation of amino groups.
RE.CNT 16
RE

(2) Belleau, B; J Am Chem Soc 1968, V90, P1651 HCAPLUS
(3) Blankemeyer-Menge, B; Tetrahedron Lett 1990, V31, P1701 HCAPLUS
(4) Carpino, L; J Am Chem Soc 1993, V115, P4397 HCAPLUS
(6) Dentino, A; J Biol Chem 1991, V266, P18460 HCAPLUS
(7) Kent, S; Ann Rev Biochem 1988, V57, P957 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 3 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 2000:514138 HCAPLUS
DN 133:252720
TI An unnatural amino acid that mimics a tripeptide .beta.-strand and forms .beta.-sheet-like hydrogen-bonded dimers
AU Nowick, James S.; Chung, De Michael; Maitra, Kalyani; Maitra, Santanu; Stigers, Kimberly D.; Sun, Ye
CS Department of Chemistry, University of California, Irvine, CA, 92697-2025, USA
SO J. Am. Chem. Soc. (2000), 122(32), 7654-7661
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
GI



I

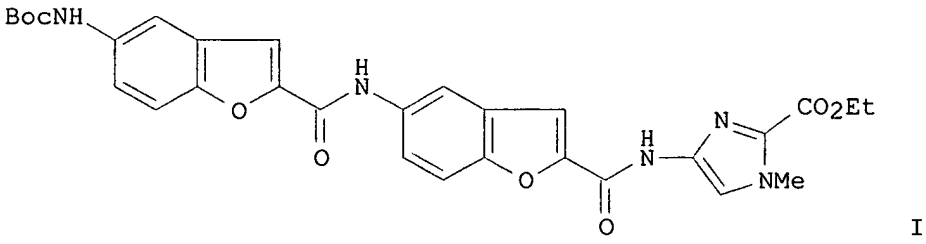


II

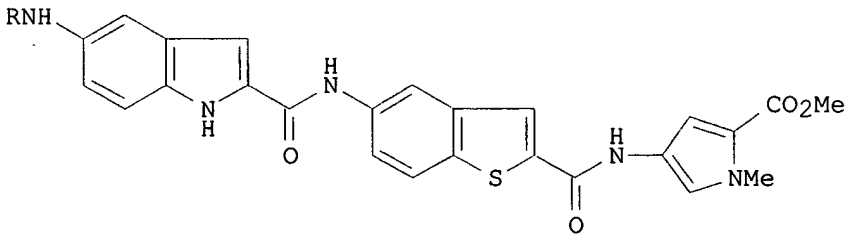
AB Unnatural amino acid 5-HO2CCONH-2-MeO-C6H3-CONHNH2 (I; abbreviated Hao) contains hydrazine, 5-amino-2-methoxybenzoic acid and oxalic acid, and it duplicates the hydrogen-bonding functionality of one edge of a tripeptide .beta.-strand. The 2,7-di(tert-butyl)fluorenylmethyloxycarbonyl (Fmoc*)- and tert-butyloxycarbonyl (Boc)-protected derivs. of Hao are prepd. efficiently and in high yields by the condensation of suitably protected derivs. of hydrazine, 5-amino-2-methoxybenzoic acid and oxalic acid. Fmoc*-Hao and Boc-Hao behave like typical Fmoc- and Boc-protected amino acids and can be incorporated into **peptides** by std. solid- and **soln.-phase peptide synthesis** techniques using carbodiimide coupling agents. Hao-contg. peptide Me2CHCO-Phe-Hao-Val-NHBu (II) forms a .beta.-sheetlike hydrogen-bonded dimer in CDCl3 and CD3OD-CDCl3 solns. Peptides contg. Hao and natural amino acids display hydrogen-bonding surfaces that are complementary to the hydrogen-bonding edges of protein .beta.-sheets.
RE.CNT 54
RE
(1) Abbenante, G; J Am Chem Soc 1995, V117, P10220 HCAPLUS
(2) Albericio, F; Int J Pept Protein Res 1987, V30, P206 HCAPLUS

(3) Albericio, F; J Org Chem 1990, V55, P3730 HCAPLUS
(4) Alsina, J; Chem Eur J 1999, V5, P2787 HCAPLUS
(5) Beijer, F; Angew Chem, Int Ed 1998, V37, P75 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 4 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 2000:405663 HCAPLUS
DN 133:223039
TI Total Synthesis of Distamycin A and 2640 Analogs: A Solution-Phase Combinatorial Approach to the Discovery of New, Bioactive DNA Binding Agents and Development of a Rapid, High-Throughput Screen for Determining Relative DNA Binding Affinity or DNA Binding Sequence Selectivity
AU Boger, Dale L.; Fink, Brian E.; Hedrick, Michael P.
CS Department of Chemistry and The Skaggs Institute for Chemical Biology, The Scripps Research Institute, La Jolla, CA, 92037, USA
SO J. Am. Chem. Soc. (2000), 122(27), 6382-6394
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
OS CASREACT 133:223039
GI



I



II

AB The development of a **soln.-phase synthesis**
Searched by John Dantzman 703-308-4488

of distamycin A and its extension to the prepn. of 2640 analogs are described. Thus, **soln.-phase synthesis** techniques with reaction workup and purifn. employing acid/base liq.-liq. extns. were used in the multistep prepn. of distamycin A (8 steps, 40% overall yield) and a prototypical library of 2640 analogs providing intermediates and final products that are .gtoreq.95% pure on conventional reaction scales. The complementary development of a simple, rapid, and high-throughput screen for DNA binding affinity based on the loss of fluorescence derived from displacement of prebound ethidium bromide is disclosed which is applicable for assessing relative or abs. binding affinity to DNA homopolymers or specific sequences (hairpin oligonucleotides). Using hairpin oligonucleotides, this method permits the screening of a library of compds. against a single predefined sequence to identify high affinity binders, or the screening of a single compd. against a full library of individual hairpin oligonucleotides to define its sequence selectivity. The combination permits the establishment of the complete DNA binding profile of each member of a library of compds. Screening the prototypical library provided compds. that are 1000 times more potent than distamycin A in cytotoxic assays (I, Boc = tert-butoxycarbonyl; IC50 = 29 nM, L1210), that bind to poly[dA]-poly[dT] with comparable affinity, and that exhibit an altered DNA binding sequence selectivity. Several candidates were identified which bound the five-base-pair AT-rich site of the PSA-ARE-3 sequence, and one (II, R = 4-dimethylaminobutyryl; K = 3.2 .times. 106 M-1) maintained the high affinity binding (K = 4.5 .times. 106 M-1) to the ARE-consensus sequence contg. a GC base-pair interrupted five-base-pair AT-rich site suitable for inhibition of gene transcription initiated by hormone insensitive androgen receptor dimerization and DNA binding characteristic of therapeutic resistant prostate cancer.

RE.CNT 55
RE
(1) Abu-Daya, A; Nucleic Acids Res 1995, V23, P3385 HCAPLUS
(2) Abu-Daya, A; Nucleic Acids Res 1997, V25, P4962 HCAPLUS
(4) Baguley, B; Nucleic Acids Res 1978, V5, P161 HCAPLUS
(5) Baird, E; J Am Chem Soc 1996, V118, P6141 HCAPLUS
(6) Behrens, C; Comb Chem High Throughput Screening 1998, V1, P127 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 5 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 2000:331625 HCAPLUS
TI Identification of new chemical motifs that bind the a-site subdomain of 16S ribosomal **RNA** using **solution-phase** combinatorial library **synthesis** techniques.
AU Kung, Pei-Pei; Lowery, Kristin; Wheeler, Patrick; Hofstadler, Steven; Swayze, Eric; Griffey, Richard
CS Ibis Therapeutics, Carlsbad, CA, 92008, USA
SO Book of Abstracts, 219th ACS National Meeting, San Francisco, CA, March 26-30, 2000 (2000), MEDI-025 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69CLAC
DT Conference; Meeting Abstract
LA English

AB The use of **soln. phase** combinatorial library **synthesis** techniques and simultaneous addn. of functionalities enabled us to efficiently prep. combinatorial libraries with diverse structures which possess potential RNA-binding motifs. The technique of simultaneous addn. of stoichiometric amts. of coupling reagents was used to attach functionalities to several sym. or asym. bi-functional scaffolds utilizing alkylation, acylation, and amidation reactions. Support-bound bases, catalysts, as well as scavengers were used to perform the alkylation reactions, the acylation reactions with isocyanates, and the HATU-activated amidation reactions. The chem. identities and 16S RNA binding activities of the combinatorial mols. were detd. by mass spectrometry.

L11 ANSWER 6 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 2000:288369 HCAPLUS
DN 133:53934
TI Synthetic agouti protein fragment (91-131) is an inverse agonist of the melanocortin-1 (MC-1) receptor
AU Eberle, Alex N.; Froidevaux, Sylvie; Meier, Maja; Jaggin, Verena; Bodi, Jozsef; Orosz, Gyorgy; Suli-Vargha, Helga
CS Department of Research (ZLF), University Hospital and University Children's Hospital, Basel, CH-4031, Switz.
SO Pept. 1998, Proc. Eur. Pept. Symp., 25th (1999), Meeting Date 1998, 66-67.
Editor(s): Bajusz, Sandor; Hudecz, Ferenc. Publisher: Akademiai Kiado, Budapest, Hung.
CODEN: 68WKAY
DT Conference
LA English
AB To obtain more information about the biol. characteristics of the C-terminal part of the agouti protein (AP) at the melanocortin-1 (MC-1) receptor, the authors studied the synthetic (91-131) AP fragment using mouse and human melanoma cells. The chem. synthesis of the C-terminal (91-131) region of AP was performed by combination of solid phase and **soln. phase peptide synthesis**. The biol. characterization of AP(91-131) was carried out with four different assay systems, namely, the MC-1 receptor binding assay, the adenylate cyclase assay, the tyrosinase assay and the melanin assay. In the binding assay, the potency of the AP(91-131) fragment as a competitor of .alpha.-MSH was only 56% compared to that of AP. In the tyrosinase and melanin assays, AP(91-131) was also less potent than AP(1-131). The agouti fragment, however, inhibited basal adenylate cyclase activity in B16-F1 cell membranes more effectively than the intact agouti protein. In summary, AP(91-131) displays the same biol. characteristics found with AP: it antagonizes .alpha.-MSH binding to MC-1 receptors and signaling in B16-F1 cells at the level of adenylate cyclase, tyrosinase and melanogenesis. However, the fact that AP(91-131) reduces basal cellular cyclase, tyrosinase and melanogenic activity in unstimulated B16-F1 cells, indicates that AP(91-131) is an inverse agonist with similar characteristics and even higher potency (in the adenylate cyclase assay) than the parent full-length agouti protein.
RE.CNT 10

RE
(1) Birnbaumer, M; J Biol Chem 1992, V267, P11783 HCAPLUS
(2) Bodi, J; Tetrahedron Lett 1997, V38, P3293 HCAPLUS
(3) Bultman, S; Cell 1992, V71, P1195 HCAPLUS
(4) Chhajlani, V; FEBS Lett 1992, V309, P417 HCAPLUS
(7) Lu, D; Nature 1994, V371, P799 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 7 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 2000:288367 HCAPLUS
DN 133:105311
TI Statistical combination of thymus peptides, a synthetic library mimicking the physiological environment
AU Birr, Christian; Braum, Gunther; Hirt, Werner; Klett-Loch, Gunther H.
CS Faculty of Chemistry, Heidelberg University, Heidelberg, D-69120, Germany
SO Pept. 1998, Proc. Eur. Pept. Symp., 25th (1999), Meeting Date 1998, 62-63.
Editor(s): Bajusz, Sandor; Hudecz, Ferenc. Publisher: Akademiai Kiado, Budapest, Hung.
CODEN: 68WKAY
DT Conference
LA English
AB A symposium report. We have synthesized a statistical chem. library of thymus **peptides** by employing stepwise **soln.** **phase peptide synthesis** conditions on those amino acids characteristic in quantity and nature to thymus tissue hydrolyzates.

L11 ANSWER 8 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 2000:234109 HCAPLUS
DN 132:334780
TI Solution synthesis of peptides
AU Sakakibara, Shumpei
CS Protein Research Foundation, Peptide Institute, Inc., Osaka, 562, Japan
SO Collect. Symp. Ser. (1999), 1(Future Aspects in Peptide Chemistry), 1-11
CODEN: CSYSFN
PB Institute of Organic Chemistry and Biochemistry, Academy of Sciences of the Czech Republic
DT Journal
LA English
AB A symposium on the author's work, comparing the effectiveness of **soln. phase synthesis** of **peptides** to solid-phase peptide **synthesis**.
RE.CNT 37
RE
(4) Chino, N; Biochem Biophys Res Commun 1988, V151, P1285 HCAPLUS
(7) Erickson, B; The Proteins 1976, V2, P255 HCAPLUS
(9) Kimura, T; Biochem Biophys Res Commun 1983, V114, P493 HCAPLUS
(10) Kimura, T; Biochem Soc Trans 1990, V18, P1297 HCAPLUS
(11) Kimura, T; Biopolymers 1981, V20, P1823 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 9 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 2000:176120 HCAPLUS
DN 133:4948
TI **Solution-Phase Synthesis** of a Hindered N-Methylated Tetrapeptide Using Bts-Protected Amino Acid Chlorides:

Efficient Coupling and Methylation Steps Allow Purification by Extraction
AU Vedejs, Edwin; Kongkittingam, Chutima
CS Department of Chemistry, University of Michigan, Ann Arbor, MI, 48109, USA
SO J. Org. Chem. (2000), 65(8), 2309-2318
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
AB N-Benzothiazole-2-sulfonyl (Bts)-protected amino acid chlorides were used to prep. the hindered cyclosporin 8-11 tetrapeptide subunit. The synthesis was performed via 3a and the deprotected amines (S)-MeVal-OCMe3, (S)-MeLeu-(S)-MeVal-OCMe3, and (S)-MeLeu-(S)-MeLeu-(S)-MeVal-OCMe3, including three repeated cycles involving N-methylation with MeI-K2CO3, deprotection of the Bts group, and N-acylation with an N-Bts-amino acid chloride. Among three Bts cleavage methods compared (H3PO2-THF, NaBH4-EtOH, PhSH-K2CO3), the third gave somewhat higher overall yields. N-Acylation of (S)-MeVal-OCMe3 with Bts-protected N-methylamino acid chloride followed by deprotection was also highly efficient and could be used as an alternative route to Bts-(S)-MeLeu-(S)-MeVal-OCMe3. Each of the deprotected amines was isolated without chromatog. using simple extn. methods to remove neutral byproducts. The tetrapeptide was obtained in anal. pure form as the monohydrate.
RE.CNT 21
RE
(1) Akaji, K; J Org Chem 1999, V64, P405 HCAPLUS
(2) Boger, D; J Am Chem Soc 1998, V120, P7220 HCAPLUS
(3) Bowman, W; Tetrahedron 1997, V53, P15787 HCAPLUS
(4) Carpino, L; Acc Chem Res 1996, V29, P268 HCAPLUS
(5) Carpino, L; Tetrahedron Lett 1998, V39, P241 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 10 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:775928 HCAPLUS
DN 132:103146
TI Stimulation of nonspecific resistance by thymopentin and its analogs against Leishmania donovani infection in hamsters
AU Sharma Anuradha, P.; Rohatgi, A.; Haq, W.; Mathur, K. B.; Katiyar, J. C.
CS Divisions of Parasitology and Biopolymers, Central Drug Research Institute, Lucknow, India
SO Peptides (N. Y.) (1999), 20(11), 1381-1383
CODEN: PPTDD5; ISSN: 0196-9781
PB Elsevier Science Inc.
DT Journal
LA English
AB Thymopentin and its analogs have been **synthesized** by the **soln. phase** method of **peptide synthesis** and evaluated for their prophylactic efficacy against L. donovani infection in hamsters. Thymopentin and some of the analogs were found to stimulate nonspecific resistance of the host against leishmania donovani infection in hamsters.
RE.CNT 11
RE
(1) Audhya, T; Proc Natl Acad Sci 1984, V81, P2847 HCAPLUS
(2) Cordero, O; Immunol Today 1997, V18, P10 HCAPLUS
(3) Diezel, W; Int J Immunopharmacol 1993, V15, P269 HCAPLUS

(5) Goldstein, A; Biological response modifiers in the treatment of cancer and infectious diseases 1993, P39 HCAPLUS
(7) Rastogi, A; FEBS Lett 1993, V317, P93 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> D BIB ABS 11-79

L11 ANSWER 11 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:708779 HCAPLUS
DN 131:351620
TI **Solution phase biopolymer synthesis** of **oligodeoxyribonucleotides** using multifunctional **liq** . **phase carriers**
IN Koster, Hubert; Worl, Ralf
PA USA
SO PCT Int. Appl., 88 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9955718	A2	19991104	WO 1999-US8939	19990426
WO 9955718	A3	19991216		

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9936643	A1	19991116	AU 1999-36643	19990426

PRAI US 1998-67337 19980427
WO 1999-US8939 19990426
AB Multifunctional liq. phase carriers (LPCs) and methods of using LPCs for the prepn. of biopolymers are provided. The LPCs are highly sym. compds. that possess more than two points of attachment for biopolymer synthesis. The LPCs have the formula Sp(X1)n, where Sp is a highly sym. moiety such that all X1 groups are equiv. X1 is a functional group that is suitable for biopolymer synthesis, including OH, SH, NH2, COOH and the like. Biopolymers that may be produced using the methods provided include oligonucleotides, peptides, protein nucleic acids (PNAs) and oligosaccharides. Analogs of the biopolymers may also be prepd. using the methods. Thus decamer d(GACCGGCAGT) was **prepd**. using multifunctional **liq**. **phase carriers**.

L11 ANSWER 12 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:442438 HCAPLUS
DN 131:239827
TI Radiometal-labelled macrocyclic chelator-derivatized somatostatin analogue with superb tumour-targeting properties and potential for receptor-mediated internal radiotherapy
AU Heppeler, A.; Froidevaux, S.; Macke, H. R.; Jermann, E.; Behe, M.; Powell, P.; Hennig, M.
CS Institute of Nuclear Medicine, Div. of Radiological Chemistry, University

Hospital Basel, Basel, CH-4031, Switz.
SO Chem.--Eur. J. (1999), 5(7), 1974-1981
CODEN: CEUJED; ISSN: 0947-6539
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
AB A monoreactive DOTA (1,4,7,10-tetraazacyclododecane-1,4,7,10-tetraacetic acid) prochelator (4,7,10-tricarboxymethyl-tert-Bu ester 1,4,7,10-tetraazacyclododecane-1-acetate) was synthesized which is useful in solid-phase and **soln.-phase peptide synthesis**; it was coupled to the somatostatin analog Tyr3-Lys5(BOC)-octreotide. Deprotection in one step afforded DOTA0-D-Phe1-Tyr3-octreotide (DOTATOC) in .apprxeq.65% yield. This peptide, modified with a chelator, was complexed with the radiometals 67Ga3+, 111In3+ and 90Y3+ in high yields and with high specific activities. The three radiopeptides show high stability in human serum and high affinity to the somatostatin receptor: it is four to five times higher for 67Ga-DOTATOC compared to 90Y-DOTATOC and 111In-DOTATOC. The 67Ga-labeled compd. also shows significantly higher tumor and lower kidney uptake than the two congeners. 67Ga-DOTATOC was compared in patients with the com. available gold std. 111In-DTPA0-D-Phe1-octreotide. The new compd. delineates SRIF-receptor pos. tumors very favorably and shows distinctly lower uptake by the kidneys. Evidently, the differences in the coordination chem. of the metals causes the differences in the biol. behavior. Indeed, a crystallog. study of the Ga3+ and Y3+ complexes of the model peptide DOTA-D-PheNH2 showed differences in the geometry of the complexes. The gallium complex is hexacoordinated with pseudooctahedral cis geometry and a folded macrocyclic unit. The equatorial plane is formed by two transannular nitrogens of the cyclen ring and two oxygens of the corresponding carboxylate groups. The two axial positions are formed by the two remaining ring nitrogen atoms. The amide carboxy oxygen is not bound to the metal and one carboxylate group is free and most likely contributes to the favorable handling of the radiopeptide by the kidneys. In contrast, the structure of Y-DOTA-D-PheNH2 has eight-fold coordination, and includes the amide carboxy oxygen. The geometry is a compact and somewhat distorted square-antiprism with two almost perfect planes (N4 and O4) with a max. deviation of 0.025 A. The dihedral angle between the two planes is only 0.36.degree..
RE.CNT 48
RE
(2) Aime, S; Angew Chem Int Ed 1998, V37, P2673 HCAPLUS
(3) Aime, S; Chem Soc Rev 1998, V27, P19 HCAPLUS
(4) Aime, S; Inorg Chem 1992, V31, P4291 HCAPLUS
(5) Albert, R; Actualite de Chimie Therapeutique 1994, V21, P111 HCAPLUS
(6) Albert, R; Bioorg Med Chem Letters 1998, V8, P1207 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 13 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:188594 HCAPLUS
DN 131:19271

TI Convergent **solution-phase synthesis** of a nucleopeptide using a protected oligonucleotide
AU McMinn, Dustin L.; Greenberg, Marc M.
CS Department of Chemistry, Colorado State University, Fort Collins, CO, 80523, USA
SO Bioorg. Med. Chem. Lett. (1999), 9(4), 547-550
CODEN: BMCLE8; ISSN: 0960-894X
PB Elsevier Science Ltd.
DT Journal
LA English
AB A nucleopeptide was prepd. in a convergent manner via segmental coupling of the protected biopolymers in soln. The resulting nucleopeptide contg. the binding site of .lambda. repressor and a peptide contg. the consensus sequence of the DNA binding helix of the helix turn-helix-proteins was obtained in 72% yield using only five equiv. of the peptide relative to the oligonucleotide. This demonstrates that the recently developed method for the soln. phase coupling of protected oligonucleotides is amenable to the convergent synthesis of larger nucleopeptides that are potentially capable of adopting secondary structure.
RE.CNT 20
RE
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(3) de la Torre, B; Tetrahedron Lett 1994, V35, P2733 HCAPLUS
(4) Erout, M; Bioconjugate Chem 1996, V7, P568 HCAPLUS
(5) Jones, D; Bioconjugate Chem 1994, V5, P390 HCAPLUS
(6) Kahl, J; J Org Chem 1998, V63, P4870 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 14 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:139856 HCAPLUS
DN 130:153924
TI **Solution phase synthesis** of oligonucleotides
IN Reese, Colin Bernard; Song, Quanlai
PA Zeneca Limited, UK
SO PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9909041	A2	19990225	WO 1998-GB2407	19980810
	WO 9909041	A3	19990506		
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9887386	A1	19990308	AU 1998-87386	19980810
	EP 1003758	A2	20000531	EP 1998-938782	19980810
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	NO 2000000690	A	20000411	NO 2000-690	20000211

PRAI GB 1997-17158 19970813
WO 1998-GB2407 19980810
OS MARPAT 130:153924
AB A process for the synthesis in soln. phase of a phosphorothioate triester is provided. The process comprises the soln. phase coupling of an H-phosphonate with an alc. in the presence of a coupling agent to form an H-phosphonate diester. The H-phosphonate diester is oxidized in situ with a sulfur transfer agent to produce the phosphorothioate triester. Preferably, the H-phosphonate and alc. are protected nucleosides or oligonucleotides. Oligonucleotide H-phosphonates which can be used in the formation of phosphorothioate triesters are also provided.

L11 ANSWER 15 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:98326 HCAPLUS
DN 130:196945
TI **Solution phase synthesis** of potential **DNA**-binding molecules based on the PNA backbone
AU Challa, Hemavathi; Woski, Stephen A.
CS Department of Chemistry and Coalition for Biomolecular Products, The University of Alabama, Tuscaloosa, AL, 35487-0336, USA
SO Tetrahedron Lett. (1999), 40(3), 419-422
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier Science Ltd.
DT Journal
LA English
AB The N-(2-aminoethyl)glycine backbone unit of PNA has been derivatized with pyrene-acetic acid and acetic acid moieties to produce monomers for the synthesis of potential poly-intercalators. Short oligomers contg. these residues have been assembled using soln. phase coupling reactions.
RE.CNT 22
RE
(1) Armitage, B; Nucleic Acids Res 1998, V26, P715 HCAPLUS
(2) Armitage, B; Proc Natl Acad Sci USA 1997, V94, P12320 HCAPLUS
(3) Atwell, G; J Med Chem 1986, V29, P69 HCAPLUS
(4) Chen, F; Nucleic Acids Res 1983, V11, P7231 HCAPLUS
(6) Dueholm, K; New J Chem 1997, V21, P19 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 16 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1998:804800 HCAPLUS
DN 130:153914
TI **Solution-Phase** Bioconjugate **Synthesis** Using Protected Oligonucleotides Containing 3'-Alkyl Carboxylic Acids
AU Kahl, Jeffrey D.; Greenberg, Marc M.
CS Department of Chemistry, Colorado State University, Fort Collins, CO, 80523, USA
SO J. Org. Chem. (1999), 64(2), 507-510
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
AB Protected oligonucleotides contg. 3'-alkyl carboxylic acids are obtained from a photolabile solid-phase synthesis support (1b). The protected oligonucleotides are efficiently conjugated (>80%) with amines in soln. to

yield products of high purity under mild reaction conditions. This method
is particularly well-suited for the synthesis of oligonucleotide-peptide conjugates contg. a covalent linkage between the 3' terminus of an oligonucleotide and the amino terminus of a peptide. High yields of nucleopeptides are obtained even when the peptide contains a hindered N-terminal amino acid.
RE.CNT 24
RE
(1) Beaucage, S; Tetrahedron 1993, V49, P1925 HCAPLUS
(2) Beaucage, S; Tetrahedron 1993, V49, P6123 HCAPLUS
(3) Bischoff, R; Anal Biochem 1987, V164, P336 HCAPLUS
(4) Erout, M; Bioconjugate Chem 1996, V7, P568 HCAPLUS
(5) Ghosh, S; Nucleic Acids Res 1987, V15, P5353 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 17 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1998:667156 HCAPLUS
DN 130:4017
TI A new approach to oligonucleotide synthesis in solution
AU Reese, Colin B.; Song, Quanlai
CS Department of Chemistry, King's College London, London, WC2R 2LS, UK
SO Nucleosides Nucleotides (1998), 17(9-11), 2027-2031
CODEN: NUNUD5; ISSN: 0732-8311
PB Marcel Dekker, Inc.
DT Journal
LA English
AB A symposium on new approach, based on the use of 3'-H-phosphonate building
blocks, is described for the synthesis of oligodeoxyribonucleotides and their phosphorothioate analogs in soln.
RE.CNT 16
RE
(1) Beaucage, S; Methods in Molecular Biology Vol 20 Protocols for Oligonucleotides and Analogs 1993, P33 HCAPLUS
(2) Behforouz, M; J Org Chem 1969, V34, P51 HCAPLUS
(3) Chattopadhyaya, J; Nucleic Acids Res 1980, V8, P2039 HCAPLUS
(4) Froehler, B; Methods in Molecular Biology Vol 20 Protocols for Oligonucleotides and Analogs 1993, P63 HCAPLUS
(5) Gura, T; Science 1995, V270, P575 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 18 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1998:645441 HCAPLUS
DN 130:25282
TI The asymmetric synthesis of arginine mimetics: derivatives of (S)-2-, 3- and 4-amidinophenylalanine suitable for incorporation into enzyme inhibitors and/or peptides
AU Kent, D. R.; Cody, W. L.; Doherty, A. M.
CS Parke-Davis Pharmaceutical Research, Division of Warner-Lambert Company, Ann Arbor, MI, USA
SO J. Pept. Res. (1998), 52(3), 201-207
CODEN: JPERFA; ISSN: 1397-002X
PB Munksgaard International Publishers Ltd.
DT Journal
LA English
AB Ortho, meta and para isomers of amidinophenylalanine represent modified

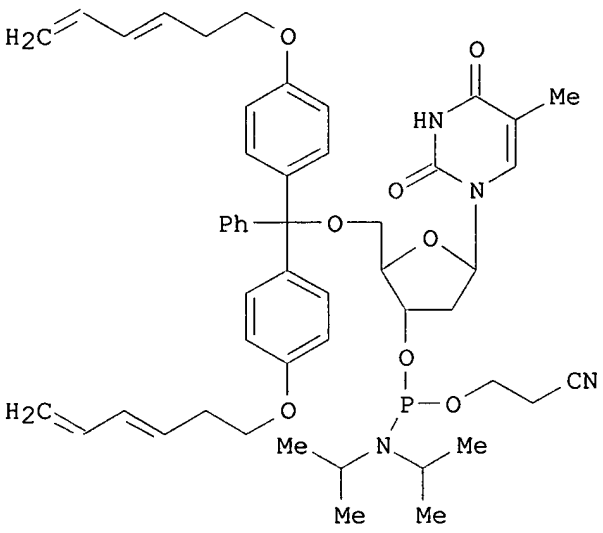
arginine residues and are important synthetic intermediates for enzyme inhibitors. Thus, a convenient asym. synthesis of (S)-N.alpha.-(tert-butyloxycarbonyl)-2-, (S)-N.alpha.-(tert-butyloxycarbonyl)-3-, and (S)-N.alpha.-(tert-butyloxycarbonyl)-4-amidinophenylalanine N,O-dimethylamides (Weinreb amides) is described here. These derivs. represent key synthetic intermediates for the synthesis of enzyme inhibitors because the amidino moiety can be readily orthogonally protected, while the Weinreb amide is easily converted to a variety of electrophilic carbonyls via redn. to the corresponding aldehyde or by reaction with various lithiated heterocycles. Also, the Weinreb amide can be reduced to the aldehyde and subsequently oxidized to the corresponding carboxylate, which is suitable for solid- or **soln.-phase peptide synthesis.**

RE.CNT 15
RE
(1) Bergner, A; J Enzyme Inhib 1995, V9, P101 HCAPLUS
(2) Das, J; Bioorg Med Chem 1995, V3, P999 HCAPLUS
(3) Dickneite, G; Thromb Res 1995, V77, P357 HCAPLUS
(4) Edmunds, J; Annual Reports in Medicinal Chemistry 1996, P51 HCAPLUS
(5) Fehrentz, J; Synthesis 1983, P676 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 19 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1998:500424 HCAPLUS
DN 129:260748
TI Chemical synthesis of peptides
AU Hruby, Victor J.; Meyer, Jean-Philippe
CS University of Arizona, USA
SO Bioorg. Chem.: Pept. Proteins (1998), 27-64, 473-479. Editor(s): Hecht, Sidney M. Publisher: Oxford University Press, New York, N. Y.
CODEN: 66LQAH
DT Conference; General Review
LA English
AB A review with 242 refs. providing an overview of the synthetic methodol. available both for **soln. phase peptide synthesis** and solid phase **peptide synthesis.** The review emphasizes general considerations that are important in peptide synthesis, introduces current topics of general interest, and points to more comprehensive treatments and other aspects of the subject in the literature.

L11 ANSWER 20 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1998:490653 HCAPLUS
DN 129:136440
TI Product anchored sequential **synthesis** method for **solution phase** prepn. of oligonucleotides and **peptides**
IN Pieken, Wolfgang; Gold, Larry
PA Nexstar Pharmaceuticals, Inc., USA
SO PCT Int. Appl., 104 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2
PATENT NO. KIND DATE APPLICATION NO. DATE

PI	WO 9830578	A1	19980716	WO 1998-US562	19980106
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 5874532	A	19990223	US 1997-780517	19970108
	AU 9860223	A1	19980803	AU 1998-60223	19980106
	EP 996627	A1	20000503	EP 1998-903457	19980106
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	US 1997-780517	19970108			
	WO 1998-US562	19980106			
OS	MARPAT 129:136440				
GI					



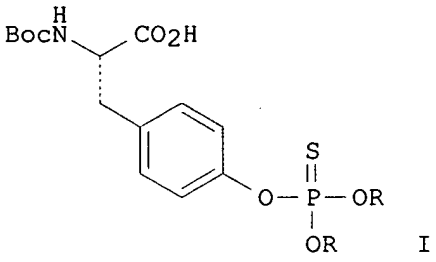
I

AB This invention discloses an improved method (product anchored sequential **synthesis**, PASS) for the sequential **soln. phase synthesis** of oligonucleotides and **peptides** via selective retention of protected lipophilic intermediates on a C18 resin, or by covalent (Diels-Alder reaction) attachment of diene-contg. protected intermediates to dienophile-derivatized resins. The method lends itself to automation and is ideally suited for large scale manuf. oligonucleotides with high efficiency. Thus, diene-contg. protected monomer I, prepd. in several steps from 3,5-hexadien-1-ol, 4,4'-dihydroxyacetophenone, PhMgBr, thymidine, and (Me2CH)2NP(Cl)OCH2CH2CN, was coupled with a polyethylene glycol (PEG) thymidine deriv., anchored to a maleimide-derivatized polystyrene resin

via a Diels-Alder reaction, purified, and cleaved to yield pure polyethylene glycol-derivatized dimer PEG-dTdT-OH.

L11 ANSWER 21 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1998:395314 HCAPLUS
DN 129:161833
TI Use of 1-.beta.-naphthalenesulfonyloxybenzotriazole as coupling reagent for peptide synthesis in the presence of fluorinated alcohols as cosolvent
AU Khare, Sanjay K.; Singh, Geeta; Agarwal, Kamlesh C.; Kundu, Bijoy
CS Division of Bioploymers, Central Drug Research Institute, Lucknow, 226001, India
SO Protein Pept. Lett. (1998), 5(3), 171-174
CODEN: PPELEN; ISSN: 0929-8665
PB Bentham Science Publishers
DT Journal
LA English
AB **Soln. phase synthesis** of **peptides** in solvents mixed with fluorinated alcs. have been carried out using 1-.beta.-naphthalenesulfonyloxybenzotriazole (NSBt) as coupling reagent.

L11 ANSWER 22 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1998:391150 HCAPLUS
DN 129:149224
TI Reactivity and suitability of t-Boc-protected thiophosphotyrosine intermediate analogs for the solid or **solution phase peptide synthesis**
AU Kim, Eun-Kyung; Choi, Heesung; Lee, Eung-Seok
CS College of Pharmacy, Yeungnam University, Kyongsan, 712-749, S. Korea
SO Arch. Pharmacal Res. (1998), 21(3), 330-337
CODEN: APHRDQ; ISSN: 0253-6269
PB Pharmaceutical Society of Korea
DT Journal
LA English
OS CASREACT 129:149224
GI



I

AB Protected O-thiophosphono-L-tyrosine derivs. I (R = Me, CH2CH2CN; Boc = Me3CO2C) were prepd. as intermediates for the synthesis of thiophosphotyrosine-contg. peptides. The reactivity and suitability of two compds. for the solid phase or **soln. phase peptide synthesis** utilizing Boc chem. were examd.

L11 ANSWER 23 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1998:159572 HCAPLUS
DN 128:230678
TI Application of AlMe3-mediated amidation reactions to **solution phase peptide synthesis**
AU Martin, Stephen F.; Dwyer, Michael P.; Lynch, Christopher L.
CS Department of Chemistry and Biochemistry, The University of Texas at Austin, Austin, TX, 78712, USA
SO Tetrahedron Lett. (1998), 39(12), 1517-1520
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier Science Ltd.
DT Journal
LA English
OS CASREACT 128:230678
AB A practical modification of the Weinreb amidation protocol employing amino acids as the amine reaction partner has been developed that allows for the facile synthesis of oligopeptides in soln. Thus, treatment of an amino acid (or a dipeptide) with AlMe3 in 1,2-dichloroethane/hexane for 30 min, followed by addn. of an N-protected amino acid ester or an N-protected peptide ester gave the corresponding N-protected peptide in 31-60% yields. Similar reactions of amino acids with carboxylic acid esters or .beta.-butyrolactone gave N-acylated amino acid derivs. in 59-77% yields.

L11 ANSWER 24 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1998:139768 HCAPLUS
TI TFFH, a versatile reagent for organic transformations in solid- and solution-phase.
AU Pillai, Sasi K.; Kates, Steven A.; Purkayastha, Subhasish
CS PerSeptive Biosystems, Framingham, MA, 01701, USA
SO Book of Abstracts, 215th ACS National Meeting, Dallas, March 29-April 2 (1998), ORGN-251 Publisher: American Chemical Society, Washington, D. C.
CODEN: 65QTAA
DT Conference; Meeting Abstract
LA English
AB Tetramethylfluoroformamidinium hexafluorophosphate (TFFH) is an effective activator recently introduced for both solid- and **soln.-phase peptide synthesis**. TFFH converts carboxylic acids to their corresponding acid fluorides, which are useful precursors for a variety of synthetic transformations. To explore the utility of this reaction in org. synthesis, apart from peptide assembly, several methods both in soln.- and solid-phase were examd. Thus, a simple and convenient one-pot conversion of carboxylic acids to alcs. was developed. A wide variety of acid substrates, including Fmoc- and Boc-protected amino acids, were reduced to the resp. alcs. in high yields and with retention of optical configuration. The protocol was also extended to the solid-phase construction of peptide-alcs. Similarly, one-pot procedures for the conversion of carboxylic acids to aldehydes, esters, amides, and thioesters; and sulfonic acids to sulfonamides, also were elaborated.

L11 ANSWER 25 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1998:1337 HCAPLUS
DN 128:75677

TI Use of propylene oxide as an acid scavenger in peptide synthesis
IN Dhaon, Madhup K.
PA Abbott Laboratories, USA
SO U.S., 4 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5698676	A	19971216	US 1995-565465	19951130

AB A process of using an alkylene oxide as an acid scavenger during **peptide syntheses** in both solid and **soln.** **phases** is claimed. The steps of this process include reacting an N.alpha.-Boc-protected amino acid with an N.alpha.-unprotected amino acid to form a peptide contg. Boc-protected amino terminus, deprotecting the formed peptide of the Boc group with an acid, and neutralizing the acid with an alkylene oxide soln. For example, to a soln. of Cbz-Phe-OBt (OBt = hydroxybenzotriazole ester) in THF/CH2Cl2 were added, in the given order, EDAC [1-ethyl-3-(3-dimethylaminopropyl)cabodiimide hydrochloride], H-Gly-OCMe3.cntdot.HCl, and a soln. of propylene oxide in THF. After a workup that included the addn. of HCl, the dipeptide, Cbz-Phe-Gly-OCMe3, was collected at an yield of 95%.

L11 ANSWER 26 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1997:758228 HCAPLUS
DN 128:48457
TI **Solution phase synthesis** of an **oligodeoxyribonucleotide** phosphorothioate for therapeutic applications
AU Cheruvallath, Z. S.; Krotz, A. H.; Cole, D. L.; Ravikumar, V. T.
CS Isis Pharmaceuticals, Carlsbad, CA, 92008, USA
SO Nucleosides Nucleotides (1997), 16(7-9), 1625-1628
CODEN: NUNUD5; ISSN: 0732-8311
PB Marcel Dekker, Inc.
DT Journal
LA English
AB Soln. phase prepn. of an oligodeoxyribonucleotide phosphorothioate octamer (5'-TTGGGGTT) using phosphorothioate triester method is reported.

L11 ANSWER 27 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1997:741352 HCAPLUS
DN 128:34952
TI A new approach to the synthesis of oligonucleotides and their phosphorothioate analogs in solution
AU Reese, Colin B.; Song, Quanlai
CS Dep. Chem., King's College London, London, WC2R 2LS, UK
SO Bioorg. Med. Chem. Lett. (1997), 7(21), 2787-2792
CODEN: BMCLE8; ISSN: 0960-894X
PB Elsevier Science Ltd.
DT Journal
LA English
AB A new approach to the synthesis of oligonucleotides and oligonucleotide phosphorothioates in soln. is described; it is based on H-phosphonate coupling at -40.degree. C, followed by in situ sulfur-transfer with either

N-[(4-chlorophenyl)sulfanyl]phthalimide 19 or 4-[(2-cyanoethyl)sulfanyl]morpholine-3,5-dione 21.

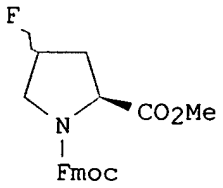
L11 ANSWER 28 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1997:669802 HCAPLUS
DN 127:293567
TI Chemical synthesis of peptides and polypeptides
AU Sadat-Aalaee, Dean
CS Biomeasure, Inc., Milford, MA, 01757, USA
SO Protein-Based Mater. (1997), 3-35. Editor(s): McGrath, Kevin; Kaplan, David. Publisher: Birkhaeuser, Boston, Mass.
CODEN: 65ECAZ
DT Conference; General Review
LA English
AB A review with 213 refs. Topics include activation, coupling, protection and deprotection, as well as both soln. and solid-phase methods.

L11 ANSWER 29 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1997:553998 HCAPLUS
DN 127:234585
TI Comparison of **solution-phase** and solid-phase **syntheses** of a restrained proline-containing analog of the nodularin macrocycle
AU Webster, Kerri L.; Rutherford, Trevor J.; Gani, David
CS Sch. Chem. and Centre Biomolecular Sciences, University, St. Andrews/Fife,
KY16 9ST, UK
SO Tetrahedron Lett. (1997), 38(32), 5713-5716
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier
DT Journal
LA English
AB The **soln.-phase synthesis** of a restrained (2S)-proline-contg. analog of the nodularin macrocycle,

cyclo-[.beta.-ala-(2R)-Glu(.alpha.-OMe)-.gamma.-(2S)-Pro-(2R)-Asp(.alpha.-OMe)-.beta.-(2S)-Phe-], is described and compared to two solid-phase syntheses of the same cyclic isopentapeptide diester; one in which Fmoc-(2S)-Phe-.beta.-Ala-(2R)-Glu(.alpha.-OMe)-.gamma.-(2S)-Pro-(2R)-Asp(.alpha.-O-Wang Resin)-.beta.-OAllyl is deprotected and then cyclized on the resin and one in which this same precursor is removed from the resin prior to cyclization.

L11 ANSWER 30 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1997:381350 HCAPLUS
DN 127:81775
TI Fluorinated peptides incorporating a 4-fluoroproline residue as potential inhibitors of HIV protease
AU Tran, Thanh Thu; Patino, Nadia; Condom, Roger; Frogier, Tea; Guedj, Roger
CS Lab. Chimie Bio-Organique, CNRS ERA 6001, Univ. Nice-Sophia Antipolis, Nice, 06108, Fr.
SO J. Fluorine Chem. (1997), 82(2), 125-130
CODEN: JFLCAR; ISSN: 0022-1139
PB Elsevier
DT Journal
LA English
OS CASREACT 127:81775

GI



I

AB Protected 4-fluoro-L-proline ester Fmoc-Pro(F)-OMe (I; Fmoc = 9-fluorenylmethoxycarbonyl) was prepd. as an attractive synthon for both solid and **soln. phase peptide synthesis**. Its use for the synthesis of Fmoc-Phe-Pro(F)-OMe and Fmoc-Pro(F)-Val-Val-OMe is presented. Direct fluorination with DAST of a 4-hydroxy proline residue incorporated into a peptide and elongation from the terminal amino group allowed prepn. of the hexapeptide Boc-Ala-Ala-Phe-Pro(F)-Val-Val-OMe, analogous to the p17-p24 gag junction of structural HIV proteins. None of the fluoropeptides in the paper displayed anti-protease or anti-HIV activity.

L11 ANSWER 31 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1997:374851 HCAPLUS
DN 126:343816
TI Method for **solution phase synthesis** of oligonucleotides
IN Pieken, Wolfgang; Mcgee, Danny; Settle, Alecia; Zhai, Yansheng; Huang, Jianping
PA Nexstar Pharmaceuticals, Inc., USA; Pieken, Wolfgang; Mcgee, Danny; Settle, Alecia; Zhai, Yansheng; Huang, Jianping
SO PCT Int. Appl., 106 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9714706	A1	19970424	WO 1996-US16668	19961017
	W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA				
	CA 2234159	AA	19970424	CA 1996-2234159	19961017
	AU 9674518	A1	19970507	AU 1996-74518	19961017
	AU 712779	B2	19991118		
	EP 863910	A1	19980916	EP 1996-936647	19961017
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2000500740	T2	20000125	JP 1997-516005	19961017
	US 6001966	A	19991214	US 1998-130232	19980806
PRAI	US 1995-5619		19951019		

WO 1996-US16668 19961017
US 1997-780517 19970108
OS MARPAT 126:343816
AB This invention discloses an improved method called PASS (product anchored sequential **synthesis**) for the **soln. phase** prepn. of **oligodeoxyribonucleotides**. The method PASS lends itself to automation and is ideally suited for large scale manuf. of oligodeoxyribonucleotides with high efficiency.

L11 ANSWER 32 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1997:240708 HCAPLUS
DN 126:225558
TI Solution synthesis of peripheral acting analgesic opioid tetrapeptides
IN Rinaldi, Nicholas
PA Biochem Pharma Inc., Can.; Rinaldi, Nicholas
SO PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9707129	A1	19970227	WO 1996-CA552	19960815
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM				
AU 9666539	A1	19970312	AU 1996-66539	19960815

PRAI GB 1995-16994 19950818
WO 1996-CA552 19960815
OS MARPAT 126:225558
AB This invention provides a bulk scale process for the soln. synthesis of enantiomerically pure, peripherally acting analgesic opioid tetrapeptides H-Tyr-R1-R2-R3-NH2, where R1 is D-Ala or D-Arg; R2 = R3 = Phe or p-fluorophenylalanine. The new and unique multi-step process includes coupling of X-Tyr-R1-OH (X = amino protecting group such as Boc) with H-R2-R3-NH2 using an activating agent such as N-hydroxysuccinimide, a neutralizing agent such as DIEA (diisopropylethylamine), and a suitable solvent such as DMF to yield the protected tetrapeptide. In this std. **soln. phase synthesis**, adjusting the individual factors (e.g., solvents, activating agents, neutralizing agents etc.) can minimize racemization of the second amino acid. Tremendous cost efficiencies are achieved due to elimination of traditional sequential blocking-deblocking cycles and multiple chromatog. purifn. steps, such that these simple kilogram quantity methods can be scaled up to com. prodn.

L11 ANSWER 33 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1997:188989 HCAPLUS
DN 126:277755
TI Synthesis of [1,2-13C2] Gly and [2,2-2H2] Gly glutathione
AU Lu, Xiao-Ming; Fischman, Alan J.; Kenneway, Michael; Tompkins, Ronald G.;

Young, Vernon R.
CS Surgical Service and Nuclear Medicine Division, Massachusetts General Hospital and Harvard Medical School, Boston, MA, 02114, USA
SO J. Labelled Compd. Radiopharm. (1997), 39(3), 205-213
CODEN: JLCRD4; ISSN: 0362-4803
PB Wiley
DT Journal
LA English
AB [1,2-13C2] Gly and [2,2-2H2] Gly isotopomers of the intracellular tripeptide glutathione were **prepd.** by std. methods of **soln. phase peptide synthesis.** The synthetic products were characterized by gas chromatog./mass spectroscopy (GC/MS) and 1H NMR spectroscopy. Optical purity was detd. by hydrolysis, derivatization of the free amino acids with isopropanol-acetyl chloride and pentafluoropropionic anhydride and NCI/MS with a Chirasil-Val Heliflex column. These compds. should serve as useful tracers for the non-invasive study of glutathione synthesis and turnover rates in humans by GC/MS.

L11 ANSWER 34 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1997:15656 HCAPLUS
DN 126:144528
TI Design of specific structures using .alpha.,.beta.-dehydrophenylalanine residues: synthesis, crystal structure, and molecular conformation of Boc-L-Val-.DELTA.Phe-.DELTA.Phe-L-Val-.DELTA.Phe-.DELTA.Phe-L-Val-OCH3, a 310-helical heptapeptide
AU Mitra, Shome Nath; Dey, Sharmistha; Karthikeyan, S.; Singh, Tej P.
CS Department Biophysics, All India Institute Medical Sciences, New Delhi, 110029, India
SO Biopolymers (1997), 41(1), 97-105
CODEN: BIPMAA; ISSN: 0006-3525
PB Wiley
DT Journal
LA English
AB To design an extensive 310-helical conformation, a heptapeptide Boc-L-Val-.DELTA.Phe-.DELTA.Phe-L-Val-.DELTA.Phe-.DELTA.Phe-L-Val-OCH3 (.DELTA.Phe = cis-.alpha.,.beta.-dehydrophenylalanine) with a repeat of two consecutive .DELTA.Phe residues has been synthesized using an azlactone method in soln. phase. The peptide was crystd. from its soln. in a methanol-water mixt. and its structure, where all peptide units are trans, has been detd. The peptide adopts a right-handed 310-helical conformation with more than two complete helical turns. Starting from the Boc group to the C-terminal residue of Val, the 310-helical structure is maintained well. The side chains of the four .DELTA.Phe residues in this helical arrangement exist in a slightly staggered arrangement. The solvent mol. (MeOH) forms two intermol. hydrogen bonds with the peptide, and thus, it helps to promote a head-to-tail packing of 310-helixes of the peptide. There are no lateral hydrogen bonds between the helixes, but there exist several van der Waals interactions involving the hydrophobic side chains of peptide mols.

L11 ANSWER 35 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1996:682011 HCAPLUS
DN 126:19172

TI **Soln. phase synthesis** of **oligodeoxyribonucleotide** phosphorothioates
IN Ravikumar, Vasulinga; Cole, Douglas L.
PA Isis Pharmaceuticals, Inc., USA
SO U.S., 17 pp. Cont.-in-part of U.S. Ser. No. 99,075.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5571902	A	19961105	US 1994-249442	19940526
	US 5614621	A	19970325	US 1993-99075	19930729
	CA 2167671	AA	19950209	CA 1994-2167671	19940720
	WO 9532980	A1	19951207	WO 1995-US6825	19950526
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
	RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9526570	A1	19951221	AU 1995-26570	19950526
	EP 766688	A1	19970409	EP 1995-921510	19950526
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	US 6001982	A	19991214	US 1996-692909	19960731
	US 5847106	A	19981208	US 1997-789443	19970127
	US 6124450	A	20000926	US 1998-123138	19980727

PRAI US 1993-99075 19930729
US 1994-249442 19940526
WO 1995-US6825 19950526
US 1997-789443 19970127

AB **Soln. phase synthesis** of **oligodeoxyribonucleotide** phosphorothioates is reported. Thus, oligodeoxyribonucleotide 5'-HO-TT dimer was prepd. via coupling of 3'-acetylthymidine with thymidine phosphoramidite.

L11 ANSWER 36 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1996:635221 HCAPLUS
DN 125:276590
TI **Solution phase synthesis** of immunoregulating **peptides**
IN Deigin, Vladislav Isakovich; Korotkov, Andrei Marxovich
PA Russia
SO PCT Int. Appl., 10 pp.
CODEN: PIXXD2
DT Patent
LA Russian
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9626955	A1	19960906	WO 1996-RU46	19960228
	W: AU, BR, BY, CA, CN, CZ, HU, JP, KG, KP, KZ, LT, LV, MN, SK, UA, US, UZ				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	RU 2107691	C1	19980327	RU 1995-102461	19950302

	CA 2214410	AA	19960906	CA 1996-2214410	19960228
	AU 9649594	A1	19960918	AU 1996-49594	19960228
	AU 708084	B2	19990729		
	EP 818462	A1	19980114	EP 1996-906117	19960228
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
	CN 1185160	A	19980617	CN 1996-192317	19960228
	JP 11505515	T2	19990521	JP 1996-526185	19960228
	BR 9607901	A	19990908	BR 1996-7901	19960228
	LV 11993	B	19980520	LV 1997-186	19971002
	LT 4393	B	19981026	LT 1997-158	19971002
	US 6051683	A	20000418	US 1998-894963	19980817
PRAI	RU 1995-102461	19950302			
	WO 1996-RU46	19960228			

OS CASREACT 125:276590; MARPAT 125:276590

AB The invention relates to medicine, specifically, to method of obtaining biol. active substances with immuno-regulating properties, and can be used in medicine and veterinary science and in exptl. biochem. The fundamental problem addressed by the invention is that of producing a novel synthetic biol. active peptide with immuno-regulating properties and of the formula: X-Glu-Trp-Y, in which X is H or Gly, Ala, Leu, Ile, Val, NVal, Pro, Tyr, Phe, Trp, D-Ala, D-Leu, D-Ile, D-Val, DNVal, D-Pro, D-Tyr, D-Phe, D-Trp, .gamma.-aminobutyric acid, .zeta.-aminocaproic acid; Y is Gly, Ala, Leu, Ile, Val, NVal, Pro, Tyr, Phe, Trp, D-Ala, D-Leu, D-Ile, D-Val, D-NVal, D-Pro, D-Tyr, D-Phe, D-Trp, .gamma.-aminobutyric acid, .zeta.-aminocaproic acid, -OH, mono- or di-substituted amide (C1-C3). Peptide synthesis takes place in soln. by successive growth of a chain from the C terminus, using a strategy of max. blocking of functional groups, starting from amino acid alkyl ester, using the method of activating the esters and the method of mixed anhydrides, using Boc amino acids. Thus, e.g., coupling of Boc-Ile pentafluorophenyl ester with Glu-Trp followed by deprotection with formic acid afforded H-Ile-Glu-Trp-OH (I) which was evaluated in the lymphocyte E-rosette formation assay in guinea pigs: E-rosette formation increased from 36.1% (after treatment with trypsin alone) to 61.4% (trypsin + 10-6 mg/mL I) vs. 60.3% (trypsin + 10-6 mg/mL thymosin fraction 5).

L11 ANSWER 37 OF 79 HCAPLUS COPYRIGHT 2000 ACS

AN 1996:572036 HCAPLUS

DN 125:222456

TI **Solution phase synthesis** of blood platelet aggregation-inhibitory N-orotylpeptide and its intermediate peptides

IN Okazaki, Takeo; Myazaki, Hiroshi

PA Shinnippon Seitetsu Kk, Japan; Shinnittetsu Kagaku

SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08183797	A2	19960716	JP 1994-327548	19941228

AB The title peptide, orotyl-Ser-Arg-Gly-Asp-Trp-OH , which is a safe and potent blood platelet aggregation inhibitor (no data), was prepd. in a large scale by the soln. phase method involving sequential Boc-deprotection and coupling of Boc-Asp-(OBzl)-OH, Boc-Gly-OH, Boc-Arg(Z)2-OH, Boc-Ser(Bzl)-OH, and orotic acid to Boc-Trp(Z)-OBzl, and deprotection of Bzl and Z groups from the resulting orotyl-Ser(Bzl)-Arg(Z)2-Gly-Asp(OBzl)-Trp(Z)-OBzl.

L11 ANSWER 38 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1996:529876 HCAPLUS
DN 125:276443
TI A solution-phase strategy for the parallel synthesis of chemical libraries containing small organic molecules: a general dipeptide mimetic and a flexible general template
AU Tarby, Christine M.; Cheng, Soan; Boger, Dale L.
CS CombiChem, Inc., San Diego, CA, 92121, USA
SO Mol. Diversity Comb. Chem.: Libr. Drug Discovery, Conf. (1996), 81-98. Editor(s): Chaiken, Irwin M.; Janda, Kim D. Publisher: American Chemical Society, Washington, D. C.
CODEN: 63HMAW
DT Conference; General Review
LA English
AB A general approach to the **soln. phase**, parallel **synthesis** of chem. libraries, which allows the **prepn.** of multi-milligram quantities of each individual member, is exemplified with both a dipeptide mimetic and flexible general template and is discussed in this review, with 87 refs. In each step of the sequence, the reactants, unreacted starting material, reagents and their byproducts are removed by simple liq./liq. or liq./solid extns. providing the desired intermediates and final compds. in high purities (.gtoreq.90-100%) independent of the reaction yields and without deliberate reaction optimization.

L11 ANSWER 39 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1996:339996 HCAPLUS
DN 125:115115
TI Synthesis of fragments of the peptide component of pseudobactin
AU Okonya, John F.; Kolasa, Teodozyj; Miller, Marvin J.
CS Department Chemistry Biochemistry, University Notre Dame, Notre Dame, IN, USA
SO J. Pept. Sci. (1996), 2(3), 157-164
CODEN: JPSIEI; ISSN: 1075-2617
DT Journal
LA English
AB Pseudobactin is a structurally complex and physiol. important siderophore (microbial iron chelator) from Pseudomonas putida-fluorescens. Various fragments of the unusual peptide component of pseudobactin were **prepd.** by **soln.-phase peptide synthesis.** A class of related peptides named pseudomycins have shown promising antifungal activity. To examine if these peptide fragments above would elicit similar activity, the fragments were tested and found to have no antifungal activity in limited bioassays.

L11 ANSWER 40 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1996:285951 HCAPLUS
DN 125:34108

TI Practical synthesis of disulfated hirudin C-terminal related peptides
AU Okayama, Toru; Hongo, Tomoko; Nukui, Eriko; Muramatsu, Ryo; Hayashi, Hideya; Morikawa, Tadanori
CS Research Laboratory, Fuji Chemical Industries, Ltd., Toyama, Japan
SO Pept. Chem. (1996), Volume Date 1995, 33rd, 129-132
CODEN: PECHDP; ISSN: 0388-3698
DT Journal
LA English
AB A symposium report on an improved practical procedure for the synthesis of disulfated hirudin C-terminal related **peptides** by a **soln**. **phase synthesis** followed by a chem. O-sulfation of the tyrosine residues. In the course of this work, the authors obsd. an extensive racemization of the C-terminal amino acid residue in the O-sulfation process with pyridine-SO3 complex in a DMF-pyridine mixt. The authors found the reaction proceeds faster in the pyridine-free solvent system and the racemization of C-terminus was also suppressed; the desired peptides were obtained in high yield.

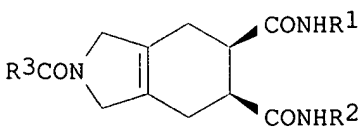
L11 ANSWER 41 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1996:285933 HCAPLUS
DN 125:34100
TI A **solution-phase synthesis** of fragment **peptide** derivatives using an automated synthesis apparatus
AU Sugawara, Tohru; Kobayashi, Kyoko; Tanaka, Toshimasa; Fukushi, Shigeha; Kitada, Chieko; Fujino, Masahiko
CS Molecular Chemistry Laboratory, Takeda Chemical Industries Ltd., Osaka, 532, Japan
SO Pept. Chem. (1996), Volume Date 1995, 33rd, 57-60
CODEN: PECHDP; ISSN: 0388-3698
DT Journal
LA English
AB A symposium report on the development of fully automated synthesis systems for prepg. and isolating various kinds of pharmaceutical compds. As one application of the author's automated synthesis systems, a library of all possible dipeptides (25), tripeptides (125) and some tetrapeptide derivs. was synthesized systematically using 5 protected amino acids. The measured mol. optical rotation values for the library of 125 tripeptides correlate with the calcd. values obtained by summation of the mol. rotation values of the constituent amino acids. The app. has also been applied to the automated synthesis of 10 fragment tripeptides that are constituents of the hormone PACAP-27, and the **soln.-phase synthesis** of other tripeptide derivs. using combinations of 10 different protected amino acids.

L11 ANSWER 42 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1996:221847 HCAPLUS
TI Synthesis of .gamma.-benzyl-.alpha.,L-glutamate oligomers and their star derivatives
AU Wang, Xiaolan; Daly, William H.
CS Department Chemistry, Louisiana State University, Baton Rouge, LA, 70803, USA
SO Book of Abstracts, 211th ACS National Meeting, New Orleans, LA, March 24-28 (1996), POLY-112 Publisher: American Chemical Society, Washington,

D. C.
CODEN: 62PIAJ
DT Conference; Meeting Abstract
LA English
AB Highly monodisperse .gamma.-benzyl-.alpha.,L-glutamate oligomers (DP=4,8,12,16) have been **synthesized** by **soln. phase** convergent **peptide synthesis**. These peptides will be used to make model star polymers by coupling them to central units. Among the coupling methods studied, it is found that O-(7-azabenzotriazol-1-yl)-1,1,3,3-tetramethyluronium hexafluorophosphate(HATU) is the most effective coupling reagent for assembling BLG 4-mers. Efforts to couple BLG 8-mers and 16-mers are in process.

L11 ANSWER 43 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1996:112931 HCAPLUS
DN 124:290228
TI **Solution phase synthesis** of Arg-Arg contained **oligopeptides** and studies on its activity
AU Zhao, MIng; Peng, Shiqi; Wang, Yinye
CS Coll. Pharmaceutical Sci., Beijing Med. Univ., Beijing, 100083, Peop. Rep. China
SO Zhongguo Yaowu Huaxue Zazhi (1995), 5(2), 91-5
CODEN: ZYHZEF
DT Journal
LA Chinese
AB Oligopeptides Leu-Arg-Arg and Ser-Leu-Arg-Arg were prepd. by the soln. method, their vasodilation effect and inhibiting effect on ADP-induced platelet aggregation were obsd. The results indicated there was no differences between them and Arg-Arg dipeptide for vasodilation potency and their antiplatelet aggregating effect was also significant.

L11 ANSWER 44 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1996:92221 HCAPLUS
DN 124:261686
TI Generalized Dipeptidomimetic Template: **Solution Phase** Parallel **Synthesis** of Combinatorial Libraries
AU Boger, Dale L.; Tarby, Christine M.; Myers, Peter L.; Caporale, Lynn Helena
CS Scripps Research Institute, La Jolla, CA, 92037, USA
SO J. Am. Chem. Soc. (1996), 118(8), 2109-10
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA English
GI



I

AB A simple and general approach to the **soln. phase**,

parallel **synthesis** of chem. libraries I [R1 = CH2C6H4Me-4, (CH2)7Me, Bu; R2 = CH2Ph, (CH2)5CN, NHR2 = piperidino; R3 = Ph, PhCH2CH2, 3-indolylmethyl] conducted on a generalized dipeptide mimetic which allows the prepn. of multimilligram quantities of each individual member is described. In each step of the sequence, the reactants, unreacted starting material, reagents and their byproducts are removed by simple liq./liq. or liq./solid extn. providing the desired intermediates and final compds. in high purities (.gtoreq.90-95%) irresp. of reaction yields and without deliberate reaction optimization.

L11 ANSWER 45 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1995:982954 HCAPLUS
DN 124:117945
TI Quinazoline Antifolate Thymidylate Synthase Inhibitors: .gamma.-Linked L-D, D-D, and D-L Dipeptide Analogs of 2-Desamino-2-methyl-N10-propargyl-5,8-dideazafolic Acid (ICI 198583)
AU Bavetsias, Vassilios; Jackman, Ann L.; Kimbell, Rosemary; Gibson, William; Boyle, F. Thomas; Bisset, Graham M. F.
CS CRC Centre for Cancer Therapeutics, Institute of Cancer Research, Sutton/Surrey, SM2 5NG, UK
SO J. Med. Chem. (1996), 39(1), 73-85
CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
AB The syntheses of .gamma.-linked L-D, D-D, and D-L dipeptide analogs of 2-desamino-2-methyl-N10-propargyl-5,8-dideazafolic acid (ICI 198583) are described. The general methodol. for the synthesis of these mols. involved the **prepn.** of the dipeptide derivs. employing **soln. phase peptide synthesis** followed by condensation of the dipeptide free bases with the appropriate pteroic acid analog via di-Et cyanophosphoridate (DEPC) activation. In the final step, tert-Bu esters were removed by trifluoroacetic acid hydrolysis. Z-L-Glu-OBut-.gamma.-D-Ala-OBut, for example, was prepd. from .alpha.-tert-Bu N-(benzyloxycarbonyl)-L-glutamate and tert-Bu D-alaninate via isobutyl-mixed anhydride coupling. The Z-group was removed by catalytic hydrogenolysis and the resulting dipeptide free base condensed with 2-desamino-2-methyl-N10-propargyl-5,8-dideazapteroic acid via DEPC coupling. Finally, tert-Bu esters were removed by TFA hydrolysis to give ICI 198583-.gamma.-D-Ala. The compds. were tested as inhibitors of thymidylate synthase and L1210 cell growth. Good enzyme and growth inhibitory activity were found with .gamma.-linked L-D dipeptides, the best examples being the Glu-.gamma.-D-Glu deriv.(Ki = 0.19 nM, L1210 IC50 = 0.20 .+-. 0.017 .mu.M) and the Glu-.gamma.-D-.alpha.-aminoadipate deriv. (Ki = 0.12 nM, L1210 IC50 = 0.13 .+-. 0.063 .mu.M). In addn., ICI 198583 L-.gamma.-D-linked dipeptides were resistant to enzymic degrdn. in mice.

L11 ANSWER 46 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1995:834145 HCAPLUS
DN 124:30383
TI Application of a unique automated **synthesis** system for **solution-phase peptide synthesis**
AU Sugawara, Tohru; Kobayashi, Kyoko; Okamoto, Shigeha; Kitada, Chieko;

Fujino, Masahiko
CS Mol. Chem. Lab., Pharmaceutical Res. Div., Osaka, 532, Japan
SO Chem. Pharm. Bull. (1995), 43(8), 1272-80
CODEN: CPBTAL; ISSN: 0009-2363
DT Journal
LA English
AB An automated synthesis system, which is suitable for repetitive syntheses using similar reaction procedures, was used to synthesize systematically a library of all possible dipeptides (25) and tripeptides (125) from 5 protected amino acids. The app. has also been applied to the automated synthesis of 10 fragment tripeptide derivs. that are constituents of the hormone PACAP-27. The measured mol. optical rotation values of the library of 125 tripeptides were found to correlate well with calcd. values obtained by summation of the mol. optical rotation values for the constituent amino acids.

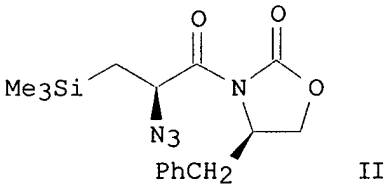
L11 ANSWER 47 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1995:631089 HCAPLUS
DN 123:286627
TI Peptide analogs of DNA consisting of L-.alpha.-amino-.gamma.-thymine butyric acid and L-valine subunits
AU Ceulemans, G.; Khan, K.; Van Schepdael, A.; Herdewijn, P.
CS Rega Inst. for Medical Res., Katholieke Univ. Leuven, Louvain, B-3000, Belg.
SO Nucleosides Nucleotides (1995), 14(3-5), 813-16
CODEN: NUNUD5; ISSN: 0732-8311
DT Journal
LA English
AB Reaction of N-Boc-L-homoserine benzylester with N3-benzoylthymine under Mitsumobu conditions afforded N-Boc-L-.alpha.-amino-.gamma.-N3-benzoylthymine butyric acid benzyl ester. After removal of the N-benzoyl and O-benzyl protecting group, this compd. was used in **soln. phase peptide synthesis**.

L11 ANSWER 48 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1995:624512 HCAPLUS
DN 123:314463
TI Rapid **solution phase synthesis** of **peptides** by the Fmoc strategy
AU Ueki, Masaaki; Tsurusaki, Takeshi; Okumura, Jin
CS Department Applied Chemistry, Science University Tokyo, Tokyo, 162, Japan
SO Pept. Chem. (1995), Volume Date 1994, 32nd, 213-16
CODEN: PECHDP; ISSN: 0388-3698
DT Journal
LA English
AB New procedures for one-pot deprotection and coupling of peptides by the Fmoc strategy were developed.

L11 ANSWER 49 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1995:549152 HCAPLUS
DN 123:170059
TI **Solution-phase synthesis** of phosphorothioate oligodeoxyribonucleosides by the phosphotriester method
AU Barber, Isabelle; Imbach, Jean-Louis; Rayner, Bernard
CS Laboratoire Chimie Bio-organique, Universite Montpellier II, Montpellier,

34095, Fr.
SO Antisense Res. Dev. (1995), 5(1), 39-47
CODEN: AREDEI; ISSN: 1050-5261
DT Journal
LA English
AB A "phosphorothioate triester method" was investigated for the **soln .-phase synthesis** of phosphorothioate oligoribonucleosides. Using fully protected 3'-phosphorothiolate thymidine bearing O-cyanoethyl and S-2,4-dichlorobenzyl groups as phosphorothioate protecting groups, decathymidine nonaphorphorothioate was efficiently assembled through a blockwise procedure. Two side reactions occurred during the deprotection steps: breakage of inter-nucleoside linkages (1.8% per linkage) and formation of phosphate diester linkages (0.9%). Substitution of the dichlorobenzyl group by the more labile 4-nitrobenzyl S-protecting group reduced the extent of internucleoside bond breakage by one-half.

L11 ANSWER 50 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1995:495195 HCAPLUS
DN 122:291514
TI Silicon-Containing Amino Acids and Peptides. Asymmetric Synthesis of (Trialkylsilyl)alanines
AU Walkup, Robert D.; Cole, Derek C.; Whittlesey, Bruce R.
CS Department of Chemistry and Biochemistry, Texas Tech University, Lubbock, TX, 79409, USA
SO J. Org. Chem. (1995), 60(8), 2630-4
CODEN: JOCEAH; ISSN: 0022-3263
DT Journal
LA English
GI



II

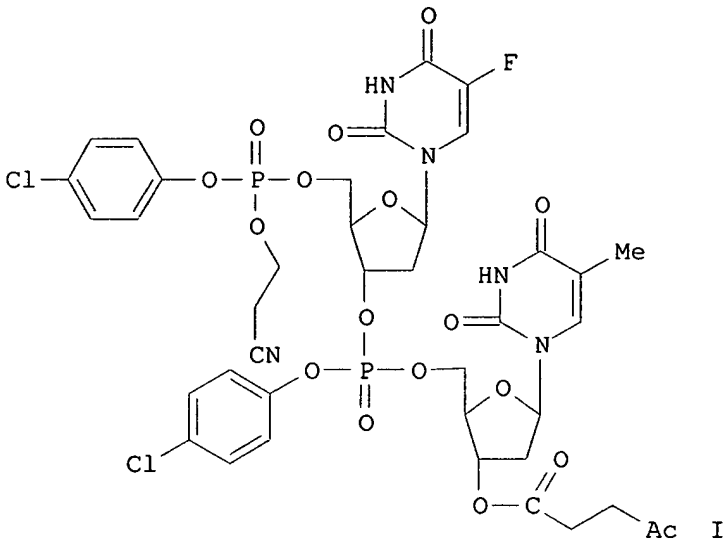
AB The three (trialkylsilyl)alanines L-RCH2CH(NH2)CO2H (I; R = Me3Si, PhSiMe2, MeSiPh2) were synthesized in 6-9 steps from the com. available starting materials Me3SiCH2CH2CO2Na, ClSiMe2Ph, and ClSiPh2Me in 42%, 19%, and 10% overall yields, resp., using an asym. .alpha.-bromination of the chiral N-acyloxazolidinone derivs. of the 3-(trialkylsilyl)propanoates to introduce the abs. configuration of the .alpha. center. Azide displacement, oxazolidinone removal, and redn. yielded I, which were converted to their N-(9-fluorenylmethoxycarbonyl) (Fmoc) derivs. for use in peptide synthesis. An x-ray crystal structure of azido(trimethylsilylpropanoyl)oxazolidinone II, an intermediate in the synthesis of I (R = SiMe3), substantiated the stereochem. course of the synthetic route. To demonstrate the ability of trialkylsilylalanines to undergo typical reactions assocd. with **soln. phase**

peptide synthesis in good yields, Fmoc-protected I (R = SiMe3) was coupled using DCC conditions to H-Phe-OMe, deprotected using diethylamine, coupled to Boc-Phe-OH (Boc = Me3CO2C), then deprotected using trifluoroacetic acid. The results reported indicate that amino acids bearing a variety of trialkylsilyl groups as large hydrophobic side chains can be synthesized by a general asym. synthesis route and incorporated into peptides.

L11 ANSWER 51 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1995:455581 HCAPLUS
TI New amino-protecting group, 2-adamantyloxycarbonyl (2-Adoc) and its applicaiton tot he synthesis of protected peptides
AU Muklherjee, Ashis K.; Agosta, William C.
CS Rockefeller Univ., New York, NY, USA
SO Chemtracts: Org. Chem. (1994), 7(6), 415-16
CODEN: CMOCEI; ISSN: 0895-4445
DT Journal
LA English
AB Researchers developed a new side-chain protecting group, 2-adamantyloxycarbonyl (2-Adoc) with the primary objective of increasing the soly. of the peptide fragment in org. solvents and of increasing stability to the conditions during the synthesis of protected peptide fragments to be used in convergent solid-phase peptide synthesis. 2-Adoc is shown to be suitable for .epsilon.-amino protection of lysine in convergent solid-phase peptide synthesis in combination with N.alpha.-fluoren-9-ylmethoxycarbonyl (Fmoc) protection and trifluoroacetic acid-labile (TFA-labile) solid support. Researchers showed the stability and susceptibility of H-Lys-(2-Adoc)-OH (Fig. 1) to various acids and bases and found that, other than methanesulfonic acid, std. deprotecting agents, wuch as trifluoromethanesulfonic acid and hydrofluoric acid, worked satisfactorily. They also showed that various Fmoc and tert-butoxycarbonyl (Boc)-protected Lys-(2-Adoc) derivs. can be prepd. with the help of std. reagents. 2-Adoc-protected peptides were also used for solid-phase synthesis in combination with N.alpha.-Fmoc protection and TFA-cleavable resin support and were shown to be stable during piperidine treatment and TFA cleavage. Moreover, the fragments contg. the 2-Adoc groups were easily sol. in DMF in sufficient concn. for their use in fragment condensation. Researchers also showed that 2-Adose group protection in **soln.-phase peptide synthesis** was stable during the **synthesis**, including the deprotection of Boc groups.

L11 ANSWER 52 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1995:418702 HCAPLUS
DN 122:315025
TI Protected 5-fluoro-2'-deoxyuridine monophosphate for **solution-phase synthesis** of **oligodeoxyribonucleotides**
AU Mazzei, Mauro; Grandi, Teresa; Balbi, Alessandro; Abramova, Tatiana V.; Damonte, Gianluca; Silvestro, Luigi
CS Ist. Sci. Farm., Genoa, 16132, Italy
SO Farmaco (1994), 49(12), 793-7
CODEN: FRMCE8
DT Journal
LA English
OS CASREACT 122:315025

GI



AB In order to obtain new building blocks for oligodeoxyribonucleotide (ODN) soln. synthesis we are describing the synthesis of the protected dinucleotide I carrying 5-fluorouracil and thymine from 5-fluoro-2'-deoxyuridine as an example of future development in this field. I is in turn hydrolyzed to yield the unprotected dimer. The latter product could be esp. useful in the delivery of 5-fluorouracil from engineered bioreactors. The mass spectra of the protected monomer and protected and deprotected dimers are discussed.

L11 ANSWER 53 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1995:224860 HCAPLUS
DN 122:133795
TI Amino acids and peptides. Part 38. Development of a new amino-protecting group, 2-adamantyloxycarbonyl, and its application to peptide synthesis
AU Nishiyama, Yasuhiro; Shintomi, Noriyuki; Kondo, Yukihiro; Okada, Yoshio
CS Faculty Pharmaceutical Sciences, Kobe-Gakuin University, Kobe, 651-21, Japan
SO J. Chem. Soc., Perkin Trans. 1 (1994), (21), 3201-7
CODEN: JCPRB4; ISSN: 0300-922X
DT Journal
LA English
AB A new lysine .epsilon.-amino protecting group, 2-adamantyloxycarbonyl (2-Adoc), was developed, and its application to the solid-phase synthesis of protected peptides was demonstrated in combination with N2-fluoren-9-ylmethoxycarbonyl (Fmoc) protection and trifluoroacetic acid (TFA)-cleavable resin support. The 2-Adoc group was applied successfully also to the **soln.-phase peptide synthesis** depending on tert-butoxycarbonyl (Boc)-chem.

L11 ANSWER 54 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1995:217625 HCAPLUS
DN 122:133642
TI 2-Diphenylmethylsilylethyl (DPSE): a versatile protecting group for oligodeoxyribonucleotide synthesis
AU Ravikumar, Vasulinga T.; Cole, Douglas L.
CS Isis Pharmaceuticals, Carlsbad, CA, 92008, USA
SO Gene (1994), 149(1), 157-61
CODEN: GENED6; ISSN: 0378-1119
DT Journal
LA English
AB 2-Diphenylmethylsilylethyl (DPSE) is a new protecting group for the internucleotidic bonds in the solid-support and **soln.-phase synthesis** of **oligodeoxyribonucleotides** by the phosphoramidite approach. This group is stable under acidic conditions and can be removed by a .beta.-fragmentation mechanism under mild conditions using aq. NH4OH. Alternatively, this group can also be removed using tetrafluorosilane in acetonitrile. Antiviral activity of oligodeoxyribonucleotide is reported (no data).

L11 ANSWER 55 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1994:509681 HCAPLUS
DN 121:109681
TI Liquid phase synthesis of peptides and peptide derivatives
IN Sivruk, Gary A.; Eynon, John S.
PA USA
SO PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9325571	A1	19931223	WO 1993-US5783	19930616
	W: AU, CA, JP, NZ, US				
	EP 598899	A1	19940601	EP 1993-916581	19930616
	EP 598899	B1	19980930		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 06509821	T2	19941102	JP 1993-501810	19930616
	AU 671660	B2	19960905	AU 1993-46381	19930616
	AT 171708	E	19981015	AT 1993-916581	19930616
	ES 2123059	T3	19990101	ES 1993-916581	19930616
	US 5516891	A	19960514	US 1994-190111	19940525
PRAI	IE 1992-1942		19920616		
	WO 1993-US5783		19930616		

AB A continuous liq. phase peptide synthesis method for prepg. peptides contg. 2-10 amino acid residues uses (1) Fmoc as the protecting group for the non-side chain amino functionality, (2) NH3 or a primary or secondary amine to remove the Fmoc protecting group, and (3) a substituted carbodiimide as the coupling agent in a proper org. solvent. Thus, H-Pro-OtBu.HCl and Fmoc-Lys(BOC)-OH were stirred 2 h with diisopropylcarbodiimide and Et3N in CH2Cl2. The resulting suspension was treated with 4-aminomethylpiperidine and stirred for 1 h followed by filtration and washing of the filtrate with pH 5.5 phosphate buffer. The soln. was dried over Na2SO4, filtered, concd., treated with Fmoc-Asp(OtBu)-OH and diisopropylcarbodiimide, and stirred 1 h.

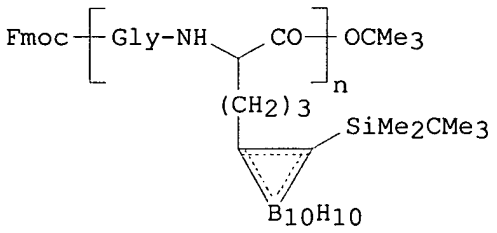
Deprotection, workup, coupling with Fmoc-Ser(OtBu)-OH, and deprotection were carried out as before; the tetrapeptide soln. was then treated with Ac2O and Et3N to give a solid which was stirred with CF3CO2H to give 65% Ac-Ser-Asp-Lys-Pro-OH.

L11 ANSWER 56 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1994:292660 HCAPLUS
DN 120:292660
TI The synthesis and use of pp60src-related peptides and phosphopeptides as substrates for enzymic phosphorylation studies
AU Perich, John W.; Meggio, Flavio; Valerio, Robert M.; Johns, R. B.; Pinna, Lorenzo A.; Reynolds, Eric C.
CS Sch. Chem., Univ. Melbourne, Parkville, 3052, Australia
SO Bioorg. Med. Chem. (1993), 1(5), 381-8
CODEN: BMECEP; ISSN: 0968-0896
DT Journal
LA English
AB A series of peptides and phosphopeptides corresponding to the auto-phosphorylation site of pp60src, -Asn-Glu-Tyr416-Thr-Ala-, were prepd. by either Boc/soln. or Fmoc/solid phase peptide synthesis and used as substrates to study their enzymic phosphorylation by various casein kinases. The Tyr(P)-contg. peptide, Asn-Glu-Tyr(P)-Thr-Ala, was prepd. by the use of Fmoc-Tyr(PO3Bzl2)-OH in Fmoc/solid phase peptide synthesis followed by acidolytic treatment of the peptide-resin with 5% anisole/CF3CO2H. Both Asn-Glu-Tyr-Thr-Ala and Asn-Glu-Ser(P)-Thr-Ala were **prepd.** by the Boc/**soln. phase peptide synthesis** and employed hydrogenolytic deprotection of the protected peptides. Enzymic phosphorylation studied established that (A) the Tyr residue acted as an unusual pos. determinant for directing phosphorylation to the Thr-residue, (B) the rate of Thr-phosphorylation was markedly facilitated by a change from the Tyr-residue to the Tyr(P)-residue, and (C) a Ser(P)-residue was as effective as the Tyr(P)-residue in facilitating Thr-phosphorylation. A subsequent structure-function study using Asn-Glu-Phe-Thr-Ala, Asn-Glu-Tyr(Me)-Thr-Ala (prepd. by Fmoc/solid phase peptide synthesis) and Asn-Glu-Cha-Thr-Ala (prepd. by hydrogenation of Asn-Glu-Tyr-Thr-Ala) established that the rate of Thr-phosphorylation was influenced by the extent of hydrophobic-hydrophobic interactions by the aralkyl side-chain group (either arom. or aliph.) of the 416-residue with casein kinase-2; the rate of Thr-phosphorylation being decreased by the introduction of Me or hydroxyl groups at the 4-position of the arom. group {i.e. Tyr(Me) and Tyr resp.} but enhanced by the introduction of the hydrophilic phosphate group {i.e. as Tyr(P)}.

L11 ANSWER 57 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1993:650272 HCAPLUS
DN 119:250272
TI Scale-up of oligonucleotide synthesis. Solution phase
AU Seliger, H.
CS Polym. Sect., Univ. Ulm, Ulm, Germany

SO Methods Mol. Biol. (Totowa, N. J.) (1993), 20(Protocols for Oligonucleotides and Analogs), 391-435
CODEN: MMBIED; ISSN: 1064-3745
DT Journal; General Review
LA English
AB A review with 228 refs. on the soln. phase prepn. of oligodeoxyribonucleotides.

L11 ANSWER 58 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1993:192250 HCAPLUS
DN 118:192250
TI **Solution-phase** segment **synthesis** of boron-rich **peptides**
AU Kane, Robert R.; Pak, Roger H.; Hawthorne, M. Frederick
CS Dep. Chem. Biochem., Univ. California, Los Angeles, CA, 90024-1569, USA
SO J. Org. Chem. (1993), 58(5), 991-2
CODEN: JOCEAH; ISSN: 0022-3263
DT Journal
LA English
OS CASREACT 118:192250
GI



I

AB Small peptides I (Fmoc = 9-fluorenylmethoxycarbonyl; n = 1, 2, 4), contg. up to 40 boron atoms, were efficiently synthesized in soln. Condensation of a closo-carborane amino ester with Fmoc-Gly-F afforded the orthogonally protected dipeptide I (n = 1) in good yield. Selective removal of protecting groups allowed segment condensations, culminating with prodn. of the octapeptide I (n = 4). The lipophilic closo-carboranes in these peptides could be readily converted to their hydrophilic anionic nido derivs. This methodol. should find utility in the precise synthesis of boron-rich macromols., and should be esp. suited for use in the antibody mediated boron neutron capture therapy of cancer.

L11 ANSWER 59 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1993:125027 HCAPLUS
DN 118:125027
TI A new and simplified method for hydrogenolytic deprotection in **solution-phase peptide synthesis**
AU Pallenberg, Alexander J.
CS Procyte Corp., Kirkland, WA, 98034, USA
SO Tetrahedron Lett. (1992), 33(50), 7693-6
CODEN: TELEAY; ISSN: 0040-4039

DT Journal
LA English
AB An improved method for the deprotection of synthetic peptides by catalytic hydrogenation is described. The new method allows for precise control of counterion stoichiometry and affords the peptides in high purity and yield, while avoiding the problems usually assocd. with conventional deprotection methods.

L11 ANSWER 60 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1993:125013 HCAPLUS
DN 118:125013
TI **Solution phase synthesis** and conformational analysis of Glu-Ser-Leu-Ser-Ser-Ser-Glu-Glu-NHMe and its peptide congeners (non-phosphorylated region 14-21 of bovine .beta.-casein A2)
AU Perich, John W.; Johns, R. B.
CS Sch. Chem., Univ. Melbourne, Parkville, 3052, Australia
SO Aust. J. Chem. (1992), 45(11), 1857-69
CODEN: AJCHAS; ISSN: 0004-9425
DT Journal
LA English
AB The octapeptide H-Glu-Ser-Leu-Ser-Ser-Ser-Glu-Glu-NHMe.CF3CO2H and its five shorter peptide congeners (from tripeptide to heptapeptide) were prepd. in high yield and purity by the tert-butoxycarbonyl mode of **soln. phase peptide synthesis** followed by palladium-catalyzed hydrogenolytic deprotection of the six protected peptides in 50% CF3CO2H/CH3CO2H soln. The anal. of the six peptides by 13C NMR spectroscopy and C18 reversed-phase chromatog. suggested that a structural arrangement commenced at the hexapeptide stage and was considered to be due to the formation of a .beta.-turn conformation.

L11 ANSWER 61 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1993:60059 HCAPLUS
DN 118:60059
TI Benextramine-neuropeptide Y receptor interactions: contribution of the benzylic moieties to [3H]neuropeptide Y displacement activity
AU Doughty, Michael B.; Chaurasia, Chandra S.; Li, Ke
CS Sch. Pharm., Univ. Kansas, Lawrence, KS, 66045-2506, USA
SO J. Med. Chem. (1993), 36(2), 272-9
CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
OS CASREACT 118:60059
AB Benextramine (BXT) analogs [RCH2NH(CH2)6NHCH2CH2S]2.4HCl (I; R = m-MeOC6H4,p-MeOC6H4, o-ClC6H4, m-ClC6H4, p-ClC6H4, 2-naphthyl, o-HOC6H4, m-HOC6H4, p-HOC6H4, H) were **synthesized** using **soln.-phase peptide synthesis** methodol. and analyzed for activity in displacing specifically bound 1nM N-[propionyl-3H]neuropeptide Y([3H]NPY) from benextramine-sensitive neuropeptide Y (NPY) binding sites in rat brain. The new synthetic approach to these analogs began with the acylation of cystamine with the N-hydroxysuccinimide ester of tert-butyloxycarbonyl (Boc) protected 6-aminohexanoic acid, followed by deprotection of the Boc groups with 4N HCl in dioxane. Acylation of this sym. diammine with N-hydroxysuccinimid

esters of appropriately substituted benzoic acids, followed by redn. of the resultant tetramides with diborane in refluxing THF, afforded the target compds. The BXT analog lacking the benzylic group [i.e., I (R = HO] had no [3H] NPY displacement activity at concns. up to 1.4 x 10-3 M. The 9-fold range in activities obsd. for the ortho, meta and para regioisomers of the methoxy, chloro, and hydroxy benextramine analogs at benextramine-sensitive NPY rat brain binding sites does not differ from the range of potencies obsd. at .alpha.-adrenoceptors. However, the order of potencies at at [3H]-NPY sites differs from the orders of potencies at .alpha.-adrenoceptors, with analogs I (R = m-MeOC6H4, m-HOC6H4, 2-naphyhyl) being the most active at [3H]-NPY binding sites. The present results demonstrate the importance of the benzylic moiety for BXT's NPY antagonist activity, and suggest that the BXT binding site on the NPY receptor is significantly distinct from that on the .alpha.-adrenoceptor.

L11 ANSWER 62 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1993:22612 HCAPLUS
DN 118:22612
TI Efficient **solution-phase synthesis** of multiple O-phosphoseryl-containing peptides related to casein and statherin
AU Perich, John W.; Kelly, David P.; Reynolds, Eric C.
CS Sch. Dent. Sci., Univ. Melbourne, Melbourne, Australia
SO Int. J. Pept. Protein Res. (1992), 40(2), 81-8
CODEN: IJPPC3; ISSN: 0367-8377
DT Journal
LA English
AB The multiple phosphoserine-contg. peptides R-[Ser(PO3H2)]n-Glu-Glu-NHMe.cntdot.CF3CO2H (R = H, n = 3; R = H-Asp, H-Glu, n = 2) were prepd. using Boc-Ser(PO3Ph2)-OH (Boc = tert-butoxycarbonyl) in the Boc mode of **soln. phase peptide synthesis** followed by Pt-mediated hydrogenolytic deprotection of the Ser(PO3Ph2)-contg. peptides. The protected peptides were assembled using the mixed anhydride coupling methods with 40% CF3CO2H/CH2Cl2 used for removal of the Boc group from intermediate Boc-protected peptides.

L11 ANSWER 63 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1992:551398 HCAPLUS
DN 117:151398
TI Preparation of nonapeptides as gonodoliberin antagonists
IN Koenig, Wolfgang; Sandow, Juergen; Kolar, Cenek
PA Hoechst A.-G., Germany
SO Eur. Pat. Appl., 16 pp.
CODEN: EPXXDW
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 477499	A1	19920401	EP 1991-112817	19910730
	EP 477499	B1	19940126		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	AT 100822	E	19940215	AT 1991-112817	19910730
	ES 2062628	T3	19941216	ES 1991-112817	19910730
	NO 9103020	A	19920205	NO 1991-3020	19910802
	CA 2048407	AA	19920205	CA 1991-2048407	19910802

	AU 9181548	A1	19920206	AU 1991-81548	19910802
	AU 641035	B2	19930909		
	ZA 9106097	A	19920429	ZA 1991-6097	19910802
	IL 99062	A1	19950731	IL 1991-99062	19910802
	JP 05148299	A2	19930615	JP 1991-219139	19910805
	US 5434138	A	19950718	US 1993-151056	19931112
PRAI	DE 1990-4024779	19900804			
	EP 1991-112817	19910730			
	US 1991-739233	19910801			

OS MARPAT 117:151398

AB Peptides X-A-B-C-Ser-D-E-F-G-Pro-H [I; X = C2-8 alkanoyl; A = D-3-(2-naphthyl)alaninyl (D-Nal), D-Phe, D-Trp all of which may be substituted on the arom. ring; B = (substituted) D-Phe; C = D-3-(3-pyridyl)alaninyl (D-Pal), (substituted) D-Phe, -D-Trp; D = Tyr, His; E = D-Ser(R1); R1 = glycosyl group; F = Leu, Trp, Phe; G = Ser(R1); H, Gly-NH2, D-Ala-NH2, azaGly-NH2] were prepd. as gonadoliberin antagonists which inhibit testosterone and estrogen biosynthesis. Thus, Ac-D-Nal-D-p-Cl-Phe-D-Pal-Ser-Tyr-D-Ser(Rha)-Leu-Ser(Rha)-Pro-D-Ala-NH2 (II) (Rha = rhamnosyl) was **prepd.** via std. **soln. phase peptide synthesis** starting from Fmoc-Pro-OH and H-D-Ala-NH2.HCl using the appropriate protected amino acids. II at 60 .mu.g/24 h via minipump infusion in rats inhibited testosterone synthesis.

L11 ANSWER 64 OF 79 HCAPLUS COPYRIGHT 2000 ACS

AN 1992:236128 HCAPLUS

DN 116:236128

TI Synthesis of the simple peptide model Ac-Abu(PO3H2)-NHMe

AU Valerio, Robert M.; Perich, John W.; Alewood, Paul F.; Tong, Glenn; Johns, R. B.

CS Sch. Chem., Univ. Melbourne, Parkville, 3052, Australia

SO Aust. J. Chem. (1992), 45(4), 777-84
CODEN: AJCHAS; ISSN: 0004-9425

DT Journal

LA English

AB The simple model substrate Ac-L-Abu(PO3H2)-NHMe [Abu(PO3H2) = NHCH(CH2CH2PO3H2)CO] was prepd. by the use of the protected 4-(diethylphosphono)butanoic acid deriv. Boc-Abu(PO3Et2)-OH (Boc = Me3CO2C) in the Boc mode of **soln. phase peptide synthesis.** The protected peptide model Ac-Abu(PO3Et2)-NHMe was prepd. by initial reaction of the isobutoxycarbonyl mixed anhydride of Boc-Abu(PO3Et2)-OH with MeNH2 followed by cleavage of the Boc group from Boc-Abu(PO3Et2)-NHMe with 4 M HCl/dioxane and N-acetylation of H-Abu(PO3Et2)-NHMe.HCl with the isobutoxycarbonyl mixed anhydride of AcOH. Cleavage of the phosphonate Et groups was effected with 33% HBr/AcOH or 10% BrSiMe3/MeCN to give Ac-L-Abu(PO3H2)-NHMe in nearly quant. yield.

L11 ANSWER 65 OF 79 HCAPLUS COPYRIGHT 2000 ACS

AN 1991:608523 HCAPLUS

DN 115:208523

TI **Solution-phase synthesis** of the potassium channel blocker, charybdotoxin

AU Lambert, Paul F.; Kuroda, Hisaya; Chino, Naoyoshi; Watanabe, Takushi X.; Kimura, Terutoshi; Sakakibara, Shumpei

CS Protein Res. Found., Pept. Inst., Inc., Minoh, Japan
SO Pept. 1990, Proc. Eur. Pept. Symp., 21st (1991), Meeting Date 1990, 111-12. Editor(s): Giralt, Ernest; Andreu, David. Publisher: ESCOM Sci. Publ., Leiden, Neth.
CODEN: 57HNAI
DT Conference
LA English
GI

pGlu-Phe-Thr-Asn-Val-Ser-Cys-Thr-Thr-Ser-Lys-
Glu-Cys-Trp-Ser-Val-Cys-Gln-Arg-Leu-His-Asn-
Thr-Ser-Arg-Gly-Lys-Cys-Met-Asn-Lys-Lys-Cys-
Arg-Cys-Tyr-Ser-OH I

AB A symposium report on the **soln.-phase synthesis** of charybdotoxin with **peptide** sequence I (pGlu = pyroglutamic acid). The linear peptide was oxidized to give the disulfide form. The disulfide bridges in the synthetic product were found to be between Cys7-Cys28, Cys13-Cys33 and Cys17-Cys35.

L11 ANSWER 66 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1991:229369 HCAPLUS
DN 114:229369
TI Synthesis of casein-related peptides and phosphopeptides. IX. A modified method for the synthesis of Ser(P) peptides by using Ppoc-Ser(PO3Bzl2)-OH
AU Perich, John W.; Alewood, Paul F.; Johns, R. B.
CS Sch. Chem., Univ. Melbourne, Parkville, 3052, Australia
SO Aust. J. Chem. (1991), 44(3), 377-87
CODEN: AJCHAS; ISSN: 0004-9425
DT Journal
LA English
AB Benzyl phosphate groups were sensitive to acid conditions, and a stability study with dibenzyl iso-Bu phosphate under various acid conditions is described. While extensive acidolytic debenzylation of the dibenzyl phosphorotriester Boc-Ser(PO3R2)-Leu-OR (I; Boc = Me3CO2C, R = CH2Ph) occurred on treatment with either 4 M HCl/dioxane or 50% CF3CO2H/CH2Cl2, only minor benzyl loss occurred with the use of HCO2H or 1 M HCl/AcOH. Minimization of benzyl phosphate loss during the synthesis of a dibenzyl phosphoserine-contg. tripeptide was effected by the use of 98% HCO2H (or 1 M HCl/AcOH) for the cleavage of the Boc group from I. In alternative procedure, the protected 2-phenylisopropyloxycarbonyl deriv. Me2CPhO2C-Ser(PO3R2)-OH (R = CH2Ph) was prepd. by an efficient four-step procedure and was used in a **soln.-phase peptide synthesis** for the high-yielding **prepn.** of Boc-Glu(OR)-Ser(PO3R2)-Leu-OR (R = OH2Ph). The protected tripeptide was deprotected by palladium-catalyzed hydrogenolysis in formic acid and gave H-Glu-SerPO3H2-Leu-OH in near quant. yield.

L11 ANSWER 67 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1991:82523 HCAPLUS
DN 114:82523
TI An efficient facilitated method for **solution phase peptide synthesis**
AU Head, David B.
CS Lab. Rational Drug Design, Univ. Hosp., Boston, MA, 02118, USA
SO Pept.: Chem., Struct. Biol., Proc. Am. Pept. Symp., 11th (1990), Meeting Date 1989, 1012-14. Editor(s): Rivier, Jean E.; Marshall, Garland R. Publisher: ESCOM Sci. Pub., Leiden, Neth.
CODEN: 56XTA7
DT Conference
LA English
AB A symposium report on the use of a cholestane moiety as a bulky cryst. handle for the **soln.-phase synthesis** of **peptides.**

L11 ANSWER 68 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1990:632007 HCAPLUS
DN 113:232007
TI **Solution-phase synthesis** of porcine brain natriuretic **peptide** (pBNP) using S-trimethylacetamidomethylcyste ine
AU Kiso, Yoshiaki; Yoshida, Makoto; Kimura, Tooru; Fujiwara, Yoichi; Shimokura, Masanori; Akaji, Kenichi
CS Dep. Med. Chem., Kyoto Pharm. Univ., Kyoto, 607, Japan
SO Chem. Pharm. Bull. (1990), 38(5), 1192-9
CODEN: CPBTAL; ISSN: 0009-2363
DT Journal
LA English
AB The hexadodecapeptide corresponding to the entire amino acid sequence of porcine brain natriuretic peptide (pBNP) was synthesized by assembling four segments in soln., followed by HF deprotection and subsequent oxidn. to establish an intramol. disulfide bridge. The synthesis using the newly developed S-trimethylacetamidomethylcysteine deriv. gave a better yield than that using the S-2,4,6-trimethylbenzylcysteine deriv. The chick rectum relaxant activity of the synthetic pBNP was 2.9 times more potent than that of .alpha.-rat atrial natriuretic peptide (.alpha.-rANP).

L11 ANSWER 69 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1990:612687 HCAPLUS
DN 113:212687
TI Preparation of tripeptides via solution phase coupling using propylphosphonic anhydride
IN Flemming, Hans Wolfram; Rukwied, Manfred; Schmidt, Manfred
PA Hoechst A.-G., Fed. Rep. Ger.
SO Ger. Offen., 4 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3839379	A1	19900523	DE 1988-3839379	19881122
	CA 1335493	A1	19950509	CA 1989-614545	19890929

PI EP 370399 A2 19900530 EP 1989-121277 19891117
EP 370399 A3 19910918
EP 370399 B1 19950621
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE
ES 2075028 T3 19951001 ES 1989-121277 19891117
DK 8905844 A 19900523 DK 1989-5844 19891121
AU 8945328 A1 19900531 AU 1989-45328 19891121
AU 626608 B2 19920806
JP 02219587 A2 19900903 JP 1989-300960 19891121
JP 2843618 B2 19990106
US 5191065 A 19930302 US 1991-728028 19910708
PRAI DE 1988-3839379 19881122
US 1989-438073 19891120
OS MARPAT 113:212687
AB U-A-B-C-OH (U = H, urethane protecting group; A, B = naturally occurring .alpha.-amino acid residue or deriv.; C = arom. .alpha.-aminoacid residue), were prepd. by 1) reaction of U1-B-OH (U1 = hydrogenolyzable urethane protecting group) with H-C-OR (R = C1-4 alkyl) in the presence of propylphosphonic anhydride (I), 2) hydrogenolysis of the coupling product to give H-B-C-OR, 3) coupling of the latter with U-A-OH in the presence of I, and 4) enzymic cleavage of the R group. Thus, a mixt. of Z-Ser-OH, H-Tyr-OMe.HCl, NaCl, EtOAc, and N-ethylmorpholine at pH 5.0 was treated with I over 30 min at .ltoreq.30.degree.. The EtOAc phase was hydrogenolyzed over Pd/C with addn. of aq. HCl to maintain pH 4.0. The aq. phase contg. the hydrogenolyzed dipeptide was coupled with Z-Trp-OH as above and the product in H2O/EtOAc was stirred with trypsin at 35-40.degree. for 7 h to give 42% Z-Trp-Ser-Tyr-OH of 98.2% purity.

L11 ANSWER 70 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1990:591863 HCAPLUS
DN 113:191863
TI In situ silylation with trimethylsilyl cyanide. An outstanding protocol for fast peptide synthesis. A synopsis
AU Anteunis, M. J. O.; Becu, C.; Becu, F.
CS Lab. Org. Chem., State Univ. Ghent, Ghent, B-9000, Belg.
SO Bull. Soc. Chim. Belg. (1990), 99(6), 361-77
CODEN: BSCBAG; ISSN: 0037-9646
DT Journal; General Review
LA English
AB The title protocol is discussed with 34 refs. The use of trimethylsilyl cyanide as a potent "in situ" silylating agent and its compatibility with most classical functionalities employed during **soln.** **phase peptide syntheses** allows repetitive **peptide** chain elongations (including linear head-to-tail) with a min. of chem. steps and manipulations. The outstanding features are: the upscaling facilities, the simplicity and the high purity of the final peptides exempt of stereomutation.

L11 ANSWER 71 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1990:235818 HCAPLUS
DN 112:235818
TI Solution syntheses of two enkephalin-containing peptides, peptide E and dynorphin(1-24), using Nin-(2,4,6-triisopropylphenylsulfonyl)tryptophan
AU Kitagawa, Kouki; Kawamoto, Tatsuhiko; Futaki, Shiroh; Kiyama, Shinya;

Akita, Tadashi; Moritoki, Hideki; Kiso, Yoshiaki
CS Fac. Pharm. Sci., Univ. Tokushima, Tokushima, 770, Japan
SO Chem. Pharm. Bull. (1989), 37(10), 2631-8
CODEN: CPBTAL; ISSN: 0009-2363
DT Journal
LA English
OS CASREACT 112:235818
AB Two enkephalin-contg. peptides, peptide E and dynorphin (1-24), were synthesized by conventional soln. methods employing a new tryptophan deriv., Nin-(2,4,6-triisopropylphenylsulfonyl)tryptophan [H-Trp(Tps)-OH]. All protecting groups employed, including the Tps group, were removed by treatment with 1 M CF3SO3H-PhSMe inCF3CO2H at the final steps of these syntheses. Subsequent purifications by Sephadex G-25 chromatog., CM-Biogel A ion exchange chromatog., and reversed-phase HPLC afforded highly purified samples. Both synthetic peptide E and dynorphin (1-24) exhibited high in vitro opioid activity. The usefulness of this new tryptophan deriv. for practical peptide synthesis was established through these syntheses of complex tryptophan-contg. peptides.

L11 ANSWER 72 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1990:179858 HCAPLUS
DN 112:179858
TI **Synthesis** of O-phosphotyrosine-containing **peptides**. II. **Solution-phase synthesis** of Asn-Glu-Ptyr-Thr-Ala through methyl phosphate protection
AU Valerio, Robert M.; Perich, John W.; Kitas, Eric A.; Alewood, Paul F.; Johns, R. B.
CS Dep. Org. Chem., Univ. Melbourne, Parkville, 3052, Australia
SO Aust. J. Chem. (1989), 42(9), 1519-25
CODEN: AJCHAS; ISSN: 0004-9425
DT Journal
LA English
OS CASREACT 112:179858
AB The O-phosphotyrosine pentapeptide H-Asn-Glu-Tyr(PO3H2)-Thr-Ala-OH.CF3CO2H, which is a naturally occurring sequence from the autophosphorylated Rous sarcoma virus pp60v-src, was prepd. in high yield from Boc-Tyr(PO3Me2)-OH (Boc = Me3CO2C) by a soln.-phase method. The protected pentapeptide Z-Asn-Glu(OBzl)-Tyr(PO3Me2)-Thr(Bzl)-Ala-OBzl (Z = PhCH2O2C; Bzl = PhCH2) was deprotected by a two-stage procedure which involved initial Pd-catalyzed hydrogenolysis followed by the removal of the phosphate Me group with BrSiMi3/MeCN, BrSiMe3/PhSMe in CF3CO3H, or CF3SO3H/CF3COH/Me2S/m-cresol.

L11 ANSWER 73 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1989:574652 HCAPLUS
DN 111:174652
TI Studies on **peptides**. CLXIV. **Solution-phase synthesis** of a 36-residue **peptide** amide corresponding to the entire amino acid sequence of chicken antral peptide
AU Guo, Lili; Murayama, Eigoro; Funakoshi, Susumu; Fujii, Nobutaka; Aono, Mitsuru; Matsuda, Masayuki; Moriga, Motoyuki; Yajima, Haruaki
CS Fac. Pharm. Sci., Kyoto Univ., Kyoto, 606, Japan
SO Chem. Pharm. Bull. (1988), 36(11), 4364-76
CODEN: CPBTAL; ISSN: 0009-2363
DT Journal
LA English
OS CASREACT 111:174652

GI

H-Phe-Leu-Pro-His-Val-Phe-Ala-Glu-Leu-Ser-Asp-
Arg-Lys-Gly-Phe-Val-Gln-Gly-Asn-Gly-Ala-Val-
Glu-Ala-Leu-His-Asp-His-Phe-Tyr-Pro-Asp-Trp-
Met-Asp-Phe-NH_2 I

AB A 36-residue peptide amide corresponding to the entire amino acid sequence of chicken antral peptide (I) was synthesized by assembling seven peptide fragments via the azide, followed by PhSMe-mediated deprotection with Me3SiBr and Me3SiO3SCF3 in CF3CO2H. The synthetic peptide stimulated gastric secretion, but not pancreatic secretion.

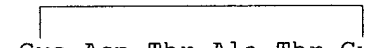
L11 ANSWER 74 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1988:455220 HCAPLUS
DN 109:55220
TI Applications of cobalt(III) complexes in solid and **solution phase peptide syntheses**
AU Mensi, Nahla E.
CS Rutgers, State Univ., New Brunswick, NJ, USA
SO (1987) 178 pp. Avail.: Univ. Microfilms Int., Order No. DA8723271 From: Diss. Abstr. Int. B 1988, 48(7), 1976
DT Dissertation
LA English
AB Unavailable

L11 ANSWER 75 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1987:554744 HCAPLUS
DN 107:154744
TI Synthesis of casein-related **peptides** and phosphopeptides. I. **Solution-phase synthesis** and carbon-13 NMR spectroscopy of the N-.alpha.-acetyl octapeptide N-methylamide corresponding to region 14-21 of bovine .beta.-casein A2
AU Perich, John W.; Alewood, Paul F.; Johns, R. B.
CS Dep. Org. Chem., Univ. Melbourne, Parkville, 3052, Australia
SO Aust. J. Chem. (1987), 40(2), 257-71
CODEN: AJCHAS; ISSN: 0004-9425
DT Journal
LA English
OS CASREACT 107:154744
AB Title octapeptide Ac-Glu-Ser-Leu-Ser-Ser-Ser-Glu-Glu-NHMe (I) was synthesized by the soln.-phase method by using the mixed anhydride coupling procedure for the fragment condensation of Ac-Glu(OBut)-Ser(But)-Leu-OH with H-Ser(But)-Ser(But)-Glu(OBzl)-Glu(OBzl)-NHMe.HCl, followed by palladium-catalyzed hydrogenolysis of Ac-Glu(OBut)-Ser(But)-Leu-Ser(But)-Ser(But)-Ser(But)-Glu(OBzl)-Glu(OBzl)-NHMe in trifluoroacetic acid. The synthesis of the two peptide fragments was accomplished in high yields and purity by using the repetitive excess mixed anhydride procedure and the isobutoxycarbonyl mixed anhydride of acetic acid for the rapid and high

yielding N-acetylation of the tripeptide fragment. 13C NMR spectroscopy was routinely used to monitor the efficiency of the coupling steps and to confirm the structure of I, signal assignments being possible for both the protected tri- and pentapeptides.

L11 ANSWER 76 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1987:214347 HCAPLUS
DN 106:214347
TI Properties of Nin-(2,4,6-triisopropylphenylsulfonyl)tryptophan and its application to the synthesis of .delta.-sleep inducing peptide
AU Kiso, Yoshiaki; Shimokura, Masanori; Narukami, Takatomo; Nakamura, Akihiro; Shiomi, Hirohito
CS Kyoto Pharm. Univ., Kyoto, 607, Japan
SO Pept. Chem. (1986), Volume Date 1985, 23rd, 131-6
CODEN: PECHDP; ISSN: 0388-3698
DT Journal
LA English
AB The 2,4,6-triisopropylphenylsulfonyl (Tps) group was introduced into the indole ring of Z(OMe)-Trp-OCH2Ph [Z(OMe) = 4-MeOC6H4CH2O2C] by treatment with Tps-Cl under phase-transfer catalytic conditions to give Z(OMe)-Trp(Tps)-OCH2Ph. The Tps group was stable under acidic (CF3CO2H, CF3CO2H/thioanisole, 25% HBr/AcOH) and basic (1N NaOH, 80% N2H4) conditions but easily removed in CF3SO3H-thioanisole-CF3CO2H. Z(OMe)-Trp(Tps)-OH was used in the **soln. phase synthesis** of .delta.-sleep inducing **peptide**, H-Trp-Gly-Gly-Asp-Ala Ser-Gly-Glu-OH.

L11 ANSWER 77 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1986:460933 HCAPLUS
DN 105:60933
TI Studies on **peptides**. CXXXVI. **Solution-phase synthesis** of a 37-residue **peptide** amide corresponding to the entire amino acid sequence of human calcitonin gene-related peptide (hCGRP)
AU Fujii, Nobutaka; Otaka, Akira; Funakoshi, Susumu; Nomizu, Motoyoshi; Akaji, Kenichi; Yajima, Haruaki; Yamamoto, Itsuo; Torizuka, Kanji; Kitagawa, Kouki; et al.
CS Kyoto Univ., Kyoto, 606, Japan
SO Chem. Pharm. Bull. (1986), 34(2), 613-20
CODEN: CPBTAL; ISSN: 0009-2363
DT Journal
LA English
OS CASREACT 105:60933
GI



H-Ala-Cys-Asp-Thr-Ala-Thr-Cys-Val-
Thr-His-Arg-Leu-Ala-Gly-Leu-Leu-
Ser-Arg-Ser-Gly-Gly-Val-Val-Lys-
Asn-Asn-Phe-Val-Pro-Thr-Asn-Val-
Gly-Ser-Lys-Ala-Phe-NH_2 I

AB The title peptide (I) was prepd. by a series of azide fragment condensations in soln. from 7 protected peptide segments. The final protected 37-peptide amide was deblocked by CF3SO3H/thioanisole in CF3CO2H and the resulting deblocked peptide was cyclized by air oxidn. to give I. The 1-adamantyl (Ad) group was used for the protection of the SH group of cysteine; the Ad group was cleaved by the above acidolysis or by (CF3CO2)Tl.

L11 ANSWER 78 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1983:122481 HCAPLUS
DN 98:122481
TI Purification of synthetic analogs of yeast mating hormone by reversed-phase chromatography
AU Shenbagamurthi, P.; Naider, Fred; Becker, Jeffrey M.; Steinfeld, Alvin S.
CS Coll. Staten Island, City Univ. New York, Staten Island, NY, 10301, USA
SO J. Chromatogr. (1983), 256(1), 117-25
CODEN: JOCRAM; ISSN: 0021-9673
DT Journal
LA English
AB The .alpha.-type cells of Saccharomyces cerevisiae secrete low-mol.-wt. peptides, termed .alpha.-factors, which affect the sexual conjugation between .alpha.- and a-mating types of this yeast. The tridecapeptide .alpha.-factor (Trp-His-Trp-Leu-Gln-Leu-Lys-Pro-Gly-Gln-Pro-Met-Tyr), the dodecapeptide .alpha.-factor (His-Trp-Leu-Gln-Leu-Lys-Pro-Gly-Gln-Pro-Met-Tyr), and a series of 8 analogs, were **synthesized** without purifn. of intermediates, using std. **soln. phase** techniques of **peptide synthesis**. Crude peptides (125-500 mg) were loaded on to a preparative .mu.Bondapak C18 column (Waters Prep LC/System 500) and eluted with MeOH-H2O-trifluoroacetic acid (TFA) mixts. The recovery of purified peptide was as high as 93%. Mating factor analogs had biol. activity similar to that of the natural peptides.
The incorporation of TFA (.ltoreq.0.025%) in the mobile phase provides excellent conditions for the sepn. and purifn. of peptides. TFA has a significant effect on both peak shape and retention time in the concn. range 0-0.25%.

L11 ANSWER 79 OF 79 HCAPLUS COPYRIGHT 2000 ACS
AN 1976:560496 HCAPLUS
DN 85:160496
TI Combined peptide synthesis method using peptide formation on insoluble supports and in solutions
AU Shvachkin, Yu. P.; Ryabtsev, M. N.; Zuyanova, T. I.; Funtova, S. M.; Ivanovskaya, L. V.; Levinskii, A. B.
CS Inst. Eksp. Endokrinol. Khim. Gorm., Moscow, USSR
SO Zh. Obshch. Khim. (1976), 46(3), 717
CODEN: ZOKHA4
DT Journal
LA Russian
AB Me3CO2C-Pro-Lys(CO2CH2Ph)-Thr-OMe was prepd. by the title procedure. Key steps included successive condensation of excess Me3CO2C-Lys(CO2CH2Ph)-OC6H4NO2-4 (I) with polymer-bound threonine (II), filtration, and reaction

of the filtrate with addnl. II. Residual I was filtered and condensed with Thr-OMe in soln.

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L12 ANSWER 1 OF 14 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 2000-292826 [25] WPIDS
DNN N2000-219598 DNC C2000-088439
TI New high molecular weight form of endostatin, useful e.g. as antiangiogenic agent for treating cancer, isolated from hemofiltrate of patients with kidney failure.
DC A88 B04 D16 S03
IN FORSSMANN, W; STAENDKER, L
PA (HAEM-N) HAEMOPEP PHARMA GMBH
CYC 20
PI WO 2000017240 A1 20000330 (200025)* DE 31p
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: JP US
ADT WO 2000017240 A1 WO 1999-EP6963 19990921
PRAI DE 1999-19926040 19990608; DE 1998-19842992 19980921; DE 1999-19915267 19990403
AN 2000-292826 [25] WPIDS
AB WO 200017240 A UPAB: 20000524
NOVELTY - High molecular weight endostatin (hE) produced from the hemofiltrate of patients with renal insufficiency.
DETAILED DESCRIPTION - The patient's blood is hemofiltered through a cellulose triacetate filter of exclusion limit 20 kD, then the hemofiltrate acidified, cooled to 4 deg. C and chromatographed on a cation exchange column as described in J. Chromatogr., A, 776 (1997) 125. The individual eluate pools (pH pools) are fractionated on a reverse-phase C4 column, eluting with a gradient of 0-30% B to 7 min then 30-65% B to 77 min (A = 0.1 vol.% trifluoroacetic acid (TFA); B = 80 vol.% acetonitrile, 0.1 vol.% TFA). The eluate fractions are screened for hE by mass spectrometry.
INDEPENDENT CLAIMS are also included for the following:
(1) pharmaceutical composition containing hE;
(2) antibodies (Ab) against hE or its synthetic fragments;
(3) diagnostic agent containing Ab;
(4) nucleic acid encoding hE; and
(5) determining the concentration of hE in the blood;
ACTIVITY - Antitumor; antiproliferative.
MECHANISM OF ACTION - hE inhibits angiogenesis.
USE - hE is used to treat;
(i) diseases that involve uncontrolled angiogenesis, particularly tumors; and
(ii) vascular diseases of supporting or connective tissue, respiratory tract, cardiovascular system, urogenital tract and nervous system, or sensory organs (particularly the eye).
hE is also used to raise specific antibodies which are used for diagnosis and treatment of conditions that involve overexpression of hE.
ADVANTAGE - hE has a very long plasma half-life and can be administered repeatedly without inducing an immune response.
Dwg.0/0

L12 ANSWER 2 OF 14 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 2000-246195 [21] WPIDS
DNC C2000-074483

TI New benzamidine compounds are platelet aggregation inhibitors for treating
e.g. thrombosis, stroke, myocardial infarction, inflammation, arteriosclerosis and metastasis.
DC B02 B03
IN BOVY, P R; RICO, J G; ROGERS, T E
PA (SEAR) SEARLE & CO G D
CYC 1
PI US 6037365 A 20000314 (200021)* 15p
ADT US 6037365 A US 1998-160089 19980925
PRAI US 1998-160089 19980925
AN 2000-246195 [21] WPIDS
AB US 6037365 A UPAB: 20000502
NOVELTY - Benzamidine compounds (I) are new.
DETAILED DESCRIPTION - Benzamidine compounds of formula (I) and their salts are new.
R1, R2 = H, halo, alkoxy, alkyl or hydroxy;
W' = H, alkyl, alkenyl, aryl or alkoxycarbonyl (all optionally substituted by alkyl or aryl (optionally substituted by halo, alkoxy or alkyl));
A = alkyl, alkenyl, alkynyl or alicyclyl (all optionally substituted by OH, alkoxy, alkyl, halo or aryl (optionally substituted by halo, NO2, alkoxy or alkyl));
Z' = a group of formula (i) or (ii);
R3, R4 = H, halo, alkoxy, alkyl, sulfonyl, arylsulfonyl, heterocyclyl, phenyl (optionally substituted by halo, alkoxy or alkyl), or phosphate, phosphinate or phosphonate (attached via P and optionally O-substituted by one or more alkyl, aryl, alkenyl or H);
u = 1 or 2;
p = 0-2;
Q = one or more H, halo, OH, alkyl or alkoxy; and
R9 = H, halo, carboxyl, alkoxycarbonyl, alkyl or alkoxy.
ACTIVITY - Antiaggregant; Thrombolytic; Cerebroprotective; Cardiant; Antiinflammatory; Antiarteriosclerotic; Cytostatic.
In assays 3S-((4-((4-(aminoiminomethyl)phenyl)amino)-1,4-dioxobutyl)amino)-4-hydroxy-(4-fluorophenyl)butanoic acid trifluoroacetate had an IC50 value for platelet aggregation in canine platelet rich plasma in vitro of 0.15 (no units are given).
MECHANISM OF ACTION - None given
USE - As platelet aggregation inhibitors (claimed) for treating e.g. thrombosis, stroke, myocardial infarction, inflammation, arteriosclerosis and metastasis.
Dwg.0/0

L12 ANSWER 3 OF 14 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 2000-205976 [18] WPIDS
DNC C2000-063689
TI New heptapeptide luteinizing hormone releasing hormone analogs used to modulate levels of sex hormones and used in the treatment of e.g. benign prostate hypertrophyl, prostate tumors, breast and ovary tumors etc..
DC B04
IN DWIGHT, W J; GREER, J; HAVIV, F; NICHOLS, C J
PA (ABBO) ABBOTT LAB

CYC 21
PI WO 2000009544 A1 20000224 (200018)* EN 52p
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: CA JP MX
ADT WO 2000009544 A1 WO 1999-US17874 19990806
PRAI US 1999-232425 19990115; US 1998-133055 19980812
AN 2000-205976 [18] WPIDS
AB WO 200009544 A UPAB: 20000412
NOVELTY - Heptapeptide luteinizing hormone releasing hormone (LHRH) analogs of formula (I) and their salts, esters and prodrugs them are new.

DETAILED DESCRIPTION - Heptapeptide LHRH analogs of formula (I) and their salts, esters and prodrugs thereof are new: R1-A-B-C-D-E-F-G-R2 (I).

R1 = lower alkylcarbonyl;

A = 3-(2-naphthyl)-D-alanyl, (3-(4-chloro))-D-phenylalanyl or sarcosyl;

B = 3-(1-naphthyl)-D-alanyl or (3-(4-chloro))-D-phenylalanyl;

C = 3-(3-pyridyl)-D-alanyl or 3-(1-naphthyl)-D-alanyl;

D = seryl;

E = arginyl, (N-epsilon-nicotinyl)lysyl, N-methylphenylalanyl, (4-(3-amino-1,2,4-triazol-5-yl))phenylalanyl, (4-(3-amino-1,2,3-triazol-5-yl))-N-methylphenylalanyl, (4-(N-acetyl))-N-methylphenylalanyl, (4-(N-nitro))-N-methylphenylalanyl, (4-(N-acetyl))-phenylalanyl, tyrosyl, N-methyltyrosyl or 1,2,3,4-tetrahydroisoquinoline-3-carbonyl;

F = D-arginyl, D-asparaginyl, D-citrulluyl, D-glutamyl, D-homocitrullyl, D-2-amino-6-NG,NG-diethylguanidinohexanoyl, (N-epsilon-nicotinyl)-D-lysyl, (4-(3-amino-1,2,4-triazol-5-yl))-D-phenylalanyl, (4-(N-acetyl))-D-phenylalanyl or D-tryptyl;

G = cyclohexylalanyl, leucyl or N-methylleucyl;

R2 = NR4 R5;

R4 = H, Me or Et;

R5 = lower alkyl or lower alkyl-R6;

R6 = NH2, guanidino, H, OH, phenyl, morpholinyl, piperidinyl, pyrrolyl, pyridyl, pyrrolidinyl, pyrrolidinonyl or quinuclidinyl wherein the piperidinyl, pyrrolyl, pyrrolidinyl and pyrrolidinonyl are optionally substituted by a methyl group.

INDEPENDENT CLAIMS are also included for the following:

(1) a pharmaceutical formulation comprising (I); and

(2) a method of modulating gonadotropin hormones in a mammal comprising administering (I).

ACTIVITY - Cytostatic; gynocological; analgesic; depilatory.

MECHANISM OF ACTION - Modulator of sex hormone levels, and (I) have activity as LHRH agonists or antagonists

USE - (I) can be used to modulate the levels of gonadotropin and androgen secretion in male and female mammals. They can be used to treat conditions such as benign prostate hypertrophy, dysmenorrhea, endometriosis, precocious puberty, prostate cancer, uterine fibrosis, prostate necrosis, breast and ovary tumors, cryptorchidism, hirsutism, gastric motility disorders and other sex hormone dependent diseases.
Dwg.0/0

L12 ANSWER 4 OF 14 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 2000-038633 [03] WPIDS
DNC C2000-009856
TI **Liquid phase carriers** for **synthesis**

of biopolymers in solution, particularly of proteins and nucleic acids.
DC B04 D16
IN KOESTER, H; WOERL, R
PA (KOES-I) KOESTER H
CYC 84
PI WO 9955718 A2 19991104 (200003)* EN 87p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW
AU 9936643 A 19991116 (200015)
ADT WO 9955718 A2 WO 1999-US8939 19990426; AU 9936643 A AU 1999-36643 19990426
FDT AU 9936643 A Based on WO 9955718
PRAI US 1998-67337 19980427
AN 2000-038633 [03] WPIDS
AB WO 9955718 A UPAB: 20000118
NOVELTY - Liquid phase carrier (LPC) comprises a polyvalent group (Sp) with more than two points of attachment that carry reactive groups (X1) for synthesis of biopolymers.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(a) sequential **solution phase synthesis** of **biopolymers** on LPC; and
(b) LPC coupled to biopolymers.
ACTIVITY - None given.
MECHANISM OF ACTION - None given.
USE - LPC are used for **solution-phase synthesis** of **peptides**, **peptide** nucleic acids, oligosaccharides and particularly oligonucleotides, especially for therapeutic applications.
ADVANTAGE - **Solution-phase synthesis** on LPC can provide (kilo)gram scale quantities of biopolymers, with high purity and better yields than possible with known solution methods. LPC, and its reaction products formed during biopolymer synthesis, are soluble in the reaction medium and can be modified to have other advantageous properties such as compatibility with chromatography. The considerable difference in size between products and reagents makes possible purification by gel-permeation chromatography and products can be analyzed by mass spectrometry (of the fully protected material), allowing direct monitoring of the synthesis process.
Dwg.0/0

L12 ANSWER 5 OF 14 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1999-590442 [50] WPIDS
DNC C1999-172356
TI Isolated protein used as a laxative in the treatment of constipation.
DC B04
IN CURRIE, M G; FOK, K F; WIEGAND, R C
PA (SEAR) SEARLE & CO G D
CYC 1
PI US 5969097 A 19991019 (199950)* 14p
ADT US 5969097 A US 1992-903029 19920623
PRAI US 1992-903029 19920623

AN 1999-590442 [50] WPIDS
AB US 5969097 A UPAB: 19991201
NOVELTY - An isolated protein containing a 15 amino acid sequence as given in the specification, is new.
DETAILED DESCRIPTION - An isolated protein containing a 15 amino acid sequence of formula (I) (human guanylin) is new.
Pro-Gly-Thr-Cys-Glu-Ile-Cys-Ala-Tyr-Ala-Ala-Cys-Thr-Gly-Cys (I).
An INDEPENDENT CLAIM is also included for an isolated protein consisting of (I).
ACTIVITY - Laxative.
MECHANISM OF ACTION - Intestinal guanylate cyclase regulator.
The figure shows the bioactivity of human guanylin in the T84 cell bioassay. Comparison of the activity of human guanylin with rat guanylin indicates that they have similar potency to activate intestinal guanylate cyclase. Both types of guanylin are about one order of magnitude less potent than STs, which are heat stable enterotoxins that activate intestinal guanylate cyclase.
USE - The protein can be used as a laxative in the treatment of constipation.
DESCRIPTION OF DRAWING(S) - The figure shows the bioactivity of human guanylin in the T84 cell bioassay.
Dwg.3a/7

L12 ANSWER 6 OF 14 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1999-570511 [48] WPIDS
DNC C1999-166443
TI Nalpha-2(p-biphenyl)-propyloxycarbonyl amino acid pentafluoro-phenyl esters used in syntheses of polypeptide chains, peptides and proteins.
DC A96 A97 B04 B05
IN CAREY, R I
PA (UYGE-N) UNIV GEORGIA RES FOUND INC
CYC 1
PI US 5952497 A 19990914 (199948)* 16p
ADT US 5952497 A Provisional US 1996-21499 19960710, US 1997-891676 19970710
PRAI US 1996-21499 19960710; US 1997-891676 19970710
AN 1999-570511 [48] WPIDS
AB US 5952497 A UPAB: 19991122
NOVELTY - N alpha -2(p-biphenyl)-propyloxycarbonyl amino acid pentafluoro-phenyl esters.
DETAILED DESCRIPTION - N alpha -2(p-biphenyl)-propyloxycarbonyl amino acid pentafluoro-phenyl esters are of formula Bpoc-Xxx-Pfp.
Xxx = amino acid excluding esters in which amino acid is L-glutamine, S-(acetamidomethyl)-L-cysteine or L-(tertiary butyl)-glutamic acid;
Bpoc = 2-(p-biphenylyl)propyloxycarbonyl; and
Pfp = pentafluorophenyl.
INDEPENDENT CLAIMS are also included for:
(1) 3,4-dihydro-4-oxo-1,2,3-benzotriazin-3-yl (ODhbt) esters of N alpha -2(p-biphenyl)propyloxycarbonyl amino acids;
(2) compounds of formula (I); and
(3) compounds of formula (II).
R and R' = H, alkyl, optionally substituted cycloalkyl, optionally substituted aryl.

Searched by John Dantzman 703-308-4488

(I) is not N alpha -2(biphenyl)-propyloxycarbonyl-L-glutamine pentafluorophenyl ester, N alpha -2(biphenyl)-propyloxycaronyl-L-glutamate pentafluorophenyl ester or N alpha -2(biphenyl)-propyloxycarbonyl-S-acetamidomethyl)-L-cysteine pentafluorophenyl ester.

USE - Used in syntheses of polypeptide chains (claimed) as well as peptides and proteins.

ADVANTAGE - Used to improve syntheses of polypeptide chains (claimed). Are storage-stable crystalline materials or storage-stable amorphous solids. Facilitate and simplify both solid- and **solution -phase peptide synthesis** especially in automated **peptide synthesizers** by eliminating need for activations, filtrations and couplings prior to peptide bond-forming reaction. Purification of peptides prepared in solution is facilitated by substantial lack of by-products. Can be used in combination with resin linkages not stable to repetitive basic reagents used to remove N alpha -Fmoc groups. Used in combination with side-chain protecting groups and resin linkages removable with trifluoroacetic acid/scavenger mixtures, distinguishing them from analogous N alpha -Boc derivatives that requires side-chain protecting groups and resin linkages removable only with stronger acid/scavenger mixtures. Facilitate peptide synthesis with N alpha -Bpoc amino acids compared with prior art N alpha -Bpoc amino acid cyclohexylamine or dicyclohexylamine salts that require tedious manipulation to activate the storage stable salts for peptide couplings. Facilitate peptide synthesis compared with other N alpha -Bpoc amino acid active esters whose reactivity is too sluggish to be useful in practical application to solid-phase peptide synthesis.

Dwg.0/0

L12 ANSWER 7 OF 14 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1998-399055 [34] WPIDS
CR 1997-258645 [23]
DNC C1998-120896
TI **Solution phase synthesis** of oligonucleotide(s) and **peptide**(s) - useful for large scale automated preparation of oligonucleotide(s) and peptide(s).
DC B04
IN GOLD, L; PIEKEN, W
PA (NEXS-N) NEXSTAR PHARM INC; (PROL-N) PROLIGO LLC
CYC 82
PI WO 9830578 A1 19980716 (199834)* EN 103p
RW: AT BE CH DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW
AU 9860223 A 19980803 (199850)
US 5874532 A 19990223 (199915)
US 6001966 A 19991214 (200005)
EP 996627 A1 20000503 (200026) EN
R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
ADT WO 9830578 A1 WO 1998-US562 19980106; AU 9860223 A AU 1998-60223 19980106;
US 5874532 A US 1997-780517 19970108; US 6001966 A Div ex US 1994-289654 19940812, CIP of WO 1996-US16668 19961017, Cont of US 1997-780517 19970108, US 1998-130232 19980806; EP 996627 A1 EP 1998-903457 19980106,

WO 1998-US562 19980106
FDT AU 9860223 A Based on WO 9830578; US 6001966 A Cont of US 5874532; EP 996627 A1 Based on WO 9830578
PRAI US 1997-780517 19970108; US 1994-289654 19940812; WO 1996-US16668 19961017; US 1998-130232 19980806
AN 1998-399055 [34] WPIDS
CR 1997-258645 [23]
AB WO 9830578 A UPAB: 20000531
Solution phase synthesis of **peptides** comprises:
(a) reacting an N-terminal protected amino acid monomer unit with a peptide starting material to form a reaction mixture containing a peptide product, and
(b) partitioning the peptide product from the unreacted peptide starting material, unreacted N-terminal protected amino acid monomer unit, side-products and reagents based on the presence of the N-terminal protecting group.
The product of the reaction is also claimed.
Also claimed is a method for the **solution phase synthesis** of **peptide** nucleic acids comprising:
(a) reacting an N-terminal protected peptide nucleic acid monomer unit with a peptide starting material to form a reaction mixture containing a peptide nucleic acid product, and
(b) partitioning the peptide nucleic acid product from the unreacted peptide starting material, unreacted N-terminal protected peptide nucleic acid monomer unit, side-products and reagents based on the presence of the N-terminal protecting group.
Also claimed is the product form this reaction.
USE - The method is use for sequential **solution phase synthesis** of oligonucleotides and **peptides**.
ADVANTAGE - The method lends itself to automation and is ideally suited for large scale manufacture of peptides and oligonucleotides with high efficiency.
Dwg.0/9

L12 ANSWER 8 OF 14 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1994-225288 [27] WPIDS
CR 1991-353169 [48]
DNC C1994-103343
TI New amino acid derivs. - useful as platelet aggregation inhibitors and in treatment of cancer.
DC B03
IN KLEIN, S I; MOLINO, B F
PA (RHON) RHONE POULENC RORER PHARM INC
CYC 1
PI US 5328900 A 19940712 (199427)* 9p
ADT US 5328900 A CIP of US 1990-505286 19900405, Cont of US 1991-724675 19910702, US 1992-961216 19921015
FDT US 5328900 A CIP of US 5064814
PRAI US 1991-724675 19910702; US 1990-505286 19900405; US 1992-961216 19921015
AN 1994-225288 [27] WPIDS
CR 1991-353169 [48]
AB US 5328900 A UPAB: 19980722

Amino acid derivs. of formula (I), and their salts, are new X = H, amidino, COR, NR,R2,CN, NHC(=NH)R1, C(=NR,)NHR2, or a op. of formula (i) or (ii): Y = OR, NR,R2, a D-or L-amino acid (or its corresp. carboximide), NR,CR3R4R5, NHCH(R5)-V,-CHR3R4, or a gp. of formula (iii): R1,R2 = H, alkyl, aryl, arylalkyl or alkyl; R3 = H, CO2H, CO2R1, CONH2, CONR,R2 or CONR6R7; R4,R5 = H, alkyl cycloalkyl, cycloalkylmethyl, TOR1, TSR1, TNR1R2, TNHC(=NH)NH)NH2, TC(=NH)NH2, TCO2R1, TCONR1R2, phenyl (substd. by X2), TCHPh2 (opt. ring substd. by X2), or T-Ar; Ar = a gp. of formula (iv)-(V1): etc. T = (CH2)p; P = 0-8; R6 + R7 = (CH2)4, (CH2)5, (CH2)6, CH2CH2OCH2CH2, CH2CH2NR,CH2 or a gp. of formula (x): X2 = H,Cl,Br,F,OR1, NO2,NR1R2, NHCOR1, SR1, 1-5C alkyl, phenyl, CO2R1, C(=NH)NH2, NHC(=NH)NH2, CONR6R7, CF3 or NHSO2R1; V, = C(O)NR1, (CH2)n, CH=CH, CH2NH, CH2O, CH2S or C(o)CH2; m = o, 1 or 2; n = o, 1, 2 or 3.

The D- or L-amino acid is Asp, Arg, Ala, Asn, Cys, Gly, Glu, Gln, His, Ile, Leu, Lys, Met, Orn, Phe, Pro, Ser, Thr, Trp, Tyr or Val; R1, R2 = H or phenyl; R3 = H or CO2H; R4,R5 = H, alkyl or cycloalkyl; R6 + R7 = (CH2)4; m = 1; n = o; p = 1.

36 Cpds. (I) are specifically claimed, e.g., pyrrolidine-3-carboxyl-azetidine-2-carboxyl-aspartyl-valine and N-amidino-piperidine-4-carboxyl-piperidine-2-carboxyl-aspartyl- isoleucine.

(I) are **prepd.** by standard solid phase or **soln.** **phase peptide synthesis** techniques.

USE - (I) are platelet aggregation inhibitors and may be used to treat or prevent thrombosis associated with certain disease states, such as myocardial infarction, stroke, peripheral arterial disease and disseminated intravascular coagulation. (I) may also be useful for treatment of certain cancerous diseases. Admin. is oral or parenteral. Dosage is 0.02-5 mg/kg day.

In an example, L-aspartyl-beta-t-butyl ester-L-valine-P-alkoxy benzyl resin ester was shaken with (S)-N-fmoc-azetidine-2-carboxylic acid (0.217g), EDC(0.128g), HOBT (0.091g) and NEt3 (0.1 ml), in DMF (10 ml), for 3 hrs. at room temp. The mixt. was filtered, washed, and the resin deriv. deprotected conventionally to give N-(S)-azetidin-2-yl-carbonyl-L-aspartyl-t-butyl ester-L-valine-p-alkoxybenzyl resin ester. This cpd. was shaken with N-60C-piperidine-4-carboxylic acid (0.205g), EDC (0.171g), hoist (0.091g) and NEt3 (0.1 ml), in DMF (10 ml), for 2 hrs. at room temp. The mixt. was filtered, washed with CH2Cl2 and the prod. cleaned from the resin. Work up gave N-(2(S)-1-(piperidin-4-ylcarbonyl)azetidin-2-ylcarbonyl)-L- aspartyl-L-valine as the trifluoroacetate salt, m.pt. 86-88 deg.C. In tests (as described in blood, 66, 946-952 (1985)), this cpd. inhibited fibrinogen mediated platelet aggregation with an ICso of 29.6 pM.

Dwg.0/0

L12 ANSWER 9 OF 14 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1992-217015 [26] WPIDS
DNC C1992-098275
TI Prodn. of growth hormone releasing **peptide** - by **soln.**- **phase synthesis** via new recrystallisable intermediates.
DC B04 B05

IN STEVENSON, D
PA (SMIK) SMITHKLINE BEECHAM CORP
CYC 21
PI WO 9209620 A1 19920611 (199226)* EN 19p
RW: AT BE CH DE DK ES FR GB GR IT LU NL SE
W: AU CA JP KR US
AU 9191664 A 19920625 (199239)
PT 99654 A 19921030 (199247)
ZA 9109440 A 19921230 (199306) 23p
EP 564587 A1 19931013 (199341) EN
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
JP 06503578 W 19940421 (199421) 7p
EP 564587 A4 19940824 (199533)
ADT WO 9209620 A1 WO 1991-US8863 19911125; AU 9191664 A AU 1991-91664 19911125, WO 1991-US8863 19911125; PT 99654 A PT 1991-99654 19911129; ZA 9109440 A ZA 1991-9440 19911129; EP 564587 A1 WO 1991-US8863 19911125, EP 1992-903706 19911125; JP 06503578 W WO 1991-US8863 19911125, JP 1992-503322 19911125; EP 564587 A4 EP 1992-903706
FDT AU 9191664 A Based on WO 9209620; EP 564587 A1 Based on WO 9209620; JP 06503578 W Based on WO 9209620
PRAI US 1990-621094 19901130
AN 1992-217015 [26] WPIDS
AB WO 9209620 A UPAB: 19931006
(A) solid recrystallisable peptide derivs. of formula (I)-(VI) are new:
Z-L-Lys(Boc)-NH2 (I)
Z-D-Phe-L-Lys(Boc)-NH2 (II)
Z-L-Trp-D-Phe-L-Lys(Boc)-NH2 (III)
Z-L-Ala-L-Trp-D-Phe-L-Lys(Boc)-NH2 (IV)
Z-D-Trp-L-Ala-L-Trp-D-Phe-L-Lys(Boc)-NH2(V)
Boc-L-His(Boc)-D-Trp-L-Ala-L-Trp-D-Phe-L-Lys(Boc)-NH2 (VI)
where Boc = t-butoxycarbonyl and Z = benzyloxycarbonyl.
(B) Prodn. of the hexapeptide amide of formula (VII):
L-His-D-Trp-L-Ala-La-Trp-D-Phe-L-Lys-NH2 (VIII)
is effected by; (a) coupling (I) with Z-D-Phe to form (II); (b) removing Z and coupling with Z-L-Trp-NH2 to form (III); (c) removing Z and coupling with Z-L-Ala to form (IV); (d) removing Z and coupling with Z-D-Trp to form (V); (e) removing Z and coupling with Boc-L-His(Boc) to form (VI); and (f) removing the Boc gps.
USE/ADVANTAGE - (VII) has pituitary growth hormone releasing activity and is useful for treating growth hormone deficiency. The process is capable of producing high-purity (VII) since each intermediate can be purified by recrystn. Decompsn. of Trp residues is minimised since only one acid treatment, in step (f) is required.
0/0
ABEQ EP 564587 A UPAB: 19931130
(A) solid re-crystallisable peptide derivs. of formula (I)-(VI) are new:
Z-L-Lys(Boc)-NH2 (I)
Z-D-Phe-L-Lys(Boc)-NH2 (II)
Z-L-Trp-D-Phe-L-Lys(Boc)-NH2 (III)
Z-L-Ala-L-Trp-D-Phe-L-Lys(Boc)-NH2 (IV)
Z-D-Trp-L-Ala-L-Trp-D-Phe-L-Lys(Boc)-NH2(V)
Boc-L-His(Boc)-D-Trp-L-Ala-L-Trp-D-Phe-L-Lys(Boc)-NH2 (VI)
where Boc = t-butoxycarbonyl and Z = benzyloxycarbonyl.
(B) Prodn. of the hexapeptide amide of formula (VII):
L-His-D-Trp-L-Ala-La-Trp-D-Phe-L-Lys-NH2 (VIII)

is effected by; (a) coupling (I) with Z-D-Phe to form (II); (b) removing Z and coupling with Z-L-Trp-NH2 to form (III); (c) removing Z and coupling with Z-L-Ala to form (IV); (d) removing Z and coupling with Z-D-Trp to form (V); (e) removing Z and coupling with Boc-L-His(Boc) to form (VI); and (f) removing the Boc gps.

USE/ADVANTAGE - (VII) has pituitary growth hormone releasing activity and is useful for treating growth hormone deficiency. The process is capable of producing high-purity (VII) since each intermediate can be purified by recrystallisation. Decomposition of Trp residues is minimised since only one acid treatment, in step (f) is required.

L12 ANSWER 10 OF 14 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1989-108338 [15] WPIDS
DNC C1989-047932
TI **Soln. phase synthesis** of octa **peptide** with thymic humoral activity - by condensing protected tetra peptide then de protecting, providing high yield and easy to scale up.
DC B04
IN DECASTIGLI, R; FORINO, R; GALANTINO, M; DE, CASTIGLIONE R
PA (FARM) FARMITALIA ERBA SPA CARLO; (FARM) FARMITALIA ERBA SRL CARLO
CYC 15
PI EP 311391 A 19890412 (198915)* EN 6p
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
AU 8823391 A 19890413 (198922)
JP 01128998 A 19890522 (198926)
EP 311391 B1 19931229 (199401) EN 9p
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
DE 3886655 G 19940210 (199407)
ES 2061678 T3 19941216 (199505)
ADT EP 311391 A EP 1988-309306 19881006; JP 01128998 A JP 1988-252856 19881006; EP 311391 B1 EP 1988-309306 19881006; DE 3886655 G DE 1988-3886655 19881006, EP 1988-309306 19881006; ES 2061678 T3 EP 1988-309306 19881006
FDT DE 3886655 G Based on EP 311391; ES 2061678 T3 Based on EP 311391
PRAI GB 1987-23484 19871007
AN 1989-108338 [15] WPIDS
AB EP 311391 A UPAB: 19930923
Prodn. of octapeptide of formula (I), and its pharmaceutically acceptable salts, comprises condensing protecting tetrapeptides (B) and (C); deprotecting the product (D), and opt. converting to salt; where X = amino protecting gp.; Y and Y', opt. present, are COOH protecting gps.; K = OH or hydrazido; W = amino protecting gp.; Q = COOH protecting gp. or OH. Pref. K = OH; Y, Y' (the same) and Q are all protecting gps.

USE/ADVANTAGE - (I) has thymic humoral activity. Compared with the known solid-phase synthesis (US 4621135), this soln. method provides easier scale-up and better yields, esp. no formation of the succinimidyl deriv. which is the main cyclic byproduct of the conventional method. 0/0
ABEQ EP 311391 B UPAB: 19940217
A process for preparing a peptide of the formula H-Leu-Glu-Asp-Gly-Pro-Lys-Phe-Leu-OH (A) or a pharmaceutically acceptable salt thereof, which process comprises condensing a compound of the formula

X-Leu-Glu(Y)-Asp(Y')-Gly-K (B) wherein X is an amino protecting group, Y and Y' each independently represents a carboxy protecting group and K is a hydroxy or hydrazido group, with a compound of formula H-Pro-Lys(W)-Phe-Leu-Q (C) wherein W is an amino protecting group and Q represents a carboxy protecting group or a hydroxy group, with the proviso that Q must be a carboxy protecting group when K is a hydroxy group; deprotecting the resultant compound of the formula X-Leu-Glu(Y)-Asp(Y')-Gly-Pro-Lys(W)-Phe-Leu-Q (D) wherein X,Y,Y',W and Q are as defined above; and, if desired, converting the resulting peptide of formula (A) into a pharmaceutically acceptable salt thereof.
Dwg.O/O

L12 ANSWER 11 OF 14 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1989-025699 [04] WPIDS
DNC C1989-011415
TI New N-substd. guanidinium tetra phenyl borate salts - useful in synthesis of peptide(s), esp. contg. arginine.
DC B05
IN CALLENS, R; COLLIN, A
PA (SOLV) SOLVAY & CIE
CYC 19
PI EP 300518 A 19890125 (198904)* FR 10p
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
AU 8817790 A 19881222 (198907)
FR 2616784 A 19881223 (198907)
JP 01016792 A 19890120 (198909)
PT 87748 A 19890531 (198925)
US 4923966 A 19900508 (199023) 7p
EP 300518 B1 19920902 (199236) FR
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
DE 3874251 G 19921008 (199242)
IL 86722 A 19930131 (199311)
US 5262567 A 19931116 (199347) 6p
ES 2043784 T3 19940101 (199405)
CA 1331496 C 19940816 (199435) FR
JP 2693493 B2 19971224 (199805) 8p
ADT EP 300518 A EP 1988-201153 19880607; FR 2616784 A FR 1987-8695 19870619; JP 01016792 A JP 1988-152079 19880620; US 4923966 A US 1988-207876 19880617; EP 300518 B1 EP 1988-201153 19880607; DE 3874251 G DE 1988-3874251 19880607, EP 1988-201153 19880607; IL 86722 A IL 1988-86722 19880613; US 5262567 A Div ex US 1988-207876 19880617, Cont of US 1990-486612 19900228, US 1992-854751 19920320; ES 2043784 T3 EP 1988-201153 19880607; CA 1331496 C CA 1988-569081 19880609; JP 2693493 B2 JP 1988-152079 19880620
FDT DE 3874251 G Based on EP 300518; US 5262567 A Div ex US 4923966; ES 2043784 T3 Based on EP 300518; JP 2693493 B2 Previous Publ. JP 01016792
PRAI FR 1987-8695 19870619
AN 1989-025699 [04] WPIDS
AB EP 300518 A UPAB: 19930923
New guanidinium tetraphenylborate cpds. of formula (I) are new, where R = organic gp. contg. at least one amino gp. Specifically, R = -X-CH(NHA)-CO-Y; X, A and Y are each linear, branched or cyclic aliphatic gps. (opt. substd. and/or unsatd.), aromatic or aliphatic gps., or heterocyclic gps.; A can also be H and Y also OH or halo.
Pref. X = (CH2)3; A = H, opt. substd. amino acid; benzyloxycarbonyl

or tert. butoxycarbonyl; Y = OH or opt. substd. amino acid. In prepn., Ph4B(-)-salt and a cpd. contg. a guanidinium cpd. are reacted at 20-1:1, esp. 1:1, mole ratio, pref. in DMF at -60 to 100 deg.C. Pref. Ph4B(-)-salts are derived from N-contg. bases, e.g. Et3N; N-(m)ethylmorpholine; N-(m)ethylpiperidine; dicyclohexylamine or imidazole.

USE/ADVANTAGE - (I) are intermediates esp. in synthesis of peptides; partic. formation of (I) is used to solubilise Arg or peptides contg. free, but protonated, Arg residues. At the end of synthesis, the Ph4B(-) ion is easily displaced, e.g. by treating with water so as to release the guanidinium function and to reform the original Ph4B-salt which can be recovered for reuse.

0/0

ABEQ DE 3874251 G UPAB: 19930923

New guanidinium tetraphenylborate cpds. of formula (I) are new, where R = organic gp. contg. at least one amino gp. Specifically, R = -X-CH(NHA)-CO-Y; X, A and Y are each linear, branched or cyclic aliphatic gps. (opt. substd. and/or unsatd.), aromatic or aliphatic gps., or heterocyclic gps.; A can also be H and Y also OH or halo.

Pref. X = (CH2)3; A = H, opt. substd. amino acid; benzyloxycarbonyl or tert. butoxycarbonyl; Y = OH or opt. substd. amino acid. In prepn., Ph4B(-)-salt and a cpd. contg. a guanidinium cpd. are reacted at 20-1:1, esp. 1:1, mole ratio, pref. in DMF at -60 to 100 deg.C. Pref. Ph4B(-)-salts are derived from N-contg. bases, e.g. Et3N; N-(m)ethylmorpholine; N-(m)ethylpiperidine; dicyclohexylamine or imidazole.

USE/ADVANTAGE - (I) are intermediates esp. in synthesis of peptides; partic. formation of (I) is used to solubilise Arg or peptides contg. free, but protonated, Arg residues. At the end of synthesis, the Ph4B(-) ion is easily displaced, e.g. by treating with water so as to release the guanidinium function and to reform the original Ph4B-salt which can be recovered for reuse.

ABEQ US 4923966 A UPAB: 19930923

Use of guanidine-related cpds. comprising a tetraphenyl-borate ion in **soln. phase peptide synthesis** is disclosed, the guanidine-related cpd. being of formula (I) where R is organic radical comprising at least one amine gp.

The cpds. are prepd. from a halogenated deriv. of carbamic acid and from substd. thiourea.

USE - Used as catalysts, plant protection agents and pharmaceutical dyes.

ABEQ US 5262567 A UPAB: 19940111

A new cpd. including a guanidine gp. and an unsubstd. tetraphenylborate ion is of formula (I), where A is H and Y is OH.

USE - (I) is soluble in organic solvents and is used in the **soln. phase synthesis** of **peptides** contg. arginine and their protection and activation. Uses include catalysis, plant protection agents and pharmaceutical dyes.

Dwg.0/0

L12 ANSWER 12 OF 14 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1989-008909 [02] WPIDS
DNC C1989-004123
TI New guanidinium tetra phenyl borate cpds. - used as intermediates for peptide synthesis.
DC B03 B05 C01 E12
IN CALLENS, R; COLLIN, A

PA (SOLV) SOLVAY & CIE
CYC 19
PI EP 297641 A 19890104 (198902)* FR 9p
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
AU 8817791 A 19881222 (198907)
FR 2616785 A 19881223 (198907)
JP 01016791 A 19890120 (198909)
PT 87749 A 19890531 (198925)
US 4954616 A 19900904 (199038) 6p
EP 297641 B 19920122 (199204)
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
DE 3867927 G 19920305 (199211)
IL 86723 A 19930114 (199305)
ES 2038740 T3 19930801 (199337)
CA 1331497 C 19940816 (199435) FR
JP 2693492 B2 19971224 (199805) 7p
ADT EP 297641 A EP 1988-201152 19880607; FR 2616785 A FR 1987-8696 19870619; JP 01016791 A JP 1988-152078 19880620; US 4954616 A US 1988-207877 19880617; IL 86723 A IL 1988-86723 19880613; ES 2038740 T3 EP 1988-201152 19880607; CA 1331497 C CA 1988-569082 19880609; JP 2693492 B2 JP 1988-152078 19880620
FDT ES 2038740 T3 Based on EP 297641; JP 2693492 B2 Previous Publ. JP 01016791
PRAI FR 1987-8696 19870619
AN 1989-008909 [02] WPIDS
AB EP 297641 A UPAB: 19930923
Guanidino tetraphenyl borates of formula (I) are new. R = an organic radical containing at least one amine function; R1-R5 = inorganic or organic groups. Specifically claimed is (I) where R = -(CH2)3-CH(NH2)-COOH; R2 = R4 = CF3; and R1 = R3 = R5 = H.

In the prepn. a tetraphenyl borate, esp. one derived from an alkali or alkaline earth metal hydroxide is reacted with a cpd. contg. a guanidinic gp. The reaction may be effected in an organic solvent such as dimethyl formamide, chloroform, dichloromethane, or carbon tetrachloride.

USE - As intermediates for peptide synthesis.

0/0
ABEQ EP 297641 B UPAB: 19930923
Guanidine-related cpds. comprising a tetraphenylborate ion, characterised in that they correspond to the general formula (I) in which R denotes an organic radical of general formula (II) in which X denotes a linear, branched or cyclic, substituted or unsubstituted, satd. or unsatd. aliphatic radical, contg. up to 25 carbon atoms, A denotes a hydrogen atom, an aliphatic or aromatic radical contg. heteroatoms or otherwise, such as protective gps. or activating gps., one or more amino acids bonded by peptide bonds, in which certain functional gps. are substituted or unsubstituted by protective gps. or activating gps.; Y denotes a hydroxyl gp., a halogen atom, an aliphatic or aromatic radical contg. or not contg. heteroatoms, such as protective gps. or activating gps., an amino gp., an amino acid or a peptide in which certain functional gps. are substituted or unsubstituted by protective gps. or activating gps. and by amine gps. of general formula NR6R7 in which R6 and R7 independently of each other denote a hydrogen atom or an alkyl gp. numbering from 1 to 3 carbon atoms;
and R1, R2, R3, R4 and R5 independently of each other denote an organic

gp. chosen from alkyl, alkoxyalkenyl or alkenyl radicals numbering from 1 to 10 carbon atoms and contg. or not contg. heteroatoms or a hydrogen atom, at least one of the radicals R1, R2, R3, R4 and R5 being other than a hydrogen atom.

ABEQ US 4954616 A UPAB: 19930923

Use of guanidine-related cpds. including tetraphenylborate ion of formula (I) in **soln. phase peptide synthesis**

, is new. In (I) R is organic gp. contg. at least one amine gp. and opt. carboxylic gp., both opt. substd.; R1-R5 are each inorganic or organic gps.

ADVANTAGE - In peptide synthesis, dissolves prod., providing activation and protection. Readily recycled.

L12 ANSWER 13 OF 14 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1986-061717 [09] WPIDS
DNC C1986-026317
TI Biologically active polypeptide recovery - by covalently binding to peptide which is capable of complexing with metal ion chelated to resin.
DC B04 D16
IN PIDGEON, C; SMITH, M C
PA (ELIL) LILLY & CO ELI
CYC 16
PI US 4569794 A 19860211 (198609)* 7p
EP 184355 A 19860611 (198624) EN
R: BE CH DE FR GB IT LI NL SE
AU 8550240 A 19860612 (198631)
JP 61148197 A 19860705 (198633)
HU 39462 T 19860929 (198645)
DK 8505352 A 19860606 (198708)
CA 1252948 A 19890418 (198920)
IL 77104 A 19900319 (199021)
EP 184355 B 19920108 (199203)
R: BE CH DE FR GB IT LI NL SE
DE 3585147 G 19920220 (199209)
HU 208025 B 19930728 (199336)
JP 07088400 B2 19950927 (199543) 10p
DK 171917 B 19970811 (199739)
ADT US 4569794 A US 1984-678602 19841205; EP 184355 A EP 1985-308471 19851121;
JP 61148197 A JP 1985-263595 19851122; HU 208025 B HU 1985-4464 19851122;
JP 07088400 B2 JP 1985-263595 19851122; DK 171917 B DK 1985-5352 19851120
FDT HU 208025 B Previous Publ. HU 39462; JP 07088400 B2 Based on JP 61148197;
DK 171917 B Previous Publ. DK 8505352
PRAI US 1984-678602 19841205
AN 1986-061717 [09] WPIDS
AB US 4569794 A UPAB: 19930922

(1) A biologically active polypeptide or protein (I) covalently linked either directly or indirectly to an immobilised metal ion chelating peptide is new. (2) Recovery of (I) from the complex by selective elution with a low pH buffer. The metal ion is immobilised on a chelating resin.

Protein or polypeptide recovered may be natural or synthetic and if synthetic can be **prepd.** by classical **solution phase synthesis**, solid phase **synthesis** or by recombinant **DNA** methodology, pref. the latter. They include insulin A chain, insulin B chain, proinsulin, growth hormone, glucagon, somatostatin, growth hormone releasing factor.

USE - The complex is an intermediate in the recovery of the

biologically active polypeptide or protein (I).
0/0
ABEQ EP 184355 B UPAB: 19930922
A compound comprising a biologically active polypeptide or protein covalently linked to a peptide that is able to chelate an immobilized divalent metal ion and that has two to five amino acid residues, at least one of which is selected from the group consisting of histidine and cysteine.

L12 ANSWER 14 OF 14 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1979-00326B [01] WPIDS
TI Radioactively labelled calcitonin hentriaconta-peptide analogue - for calcitonin radioimmunoassay determination.
DC B04 K08 S03 S05
IN KUMAHARA, Y; OKADA, Y; SAKAKIBARA, S
PA (DARA) DAIICHI RADIOISOTOPE LAB LTD
CYC 5
PI DE 2826844 A 19781221 (197901)*
JP 54009293 A 19790124 (197909)
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New radioiodine-labelled peptide is the hentriacontapeptide of formula (I)
labelled with radioactive iodine:
Also new is the use of radioiodinated (I) as tracer in the radioimmunoassay of calcitonin.
Radioiodinated (I) is more stable and purer than radioiodinated natural calcitonin, due to the absence of disulphide bonds, but behaves in
practically the same way as human calcitonin in antigen-antibody reactions.
Examples describe the **prepn.** of the hentriacontapeptide (I) by **solution-phase peptide synthesis**
, the radioiodination of (I) with Na125 I in the presence of chloramine T,
the prodn. of calcitonin antibody using (I) as antigen, and the use of radioiodinated (I) and the antibody in the radio-immunoassay determination
of serum calcitonin.